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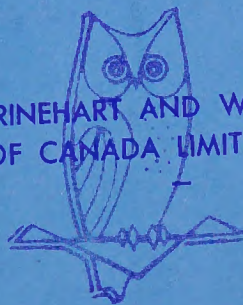


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Alberta Foothills



*A sample study of life within view
of the Canadian Rockies*

An inductive approach

author

Gary de Leeuw

general editor

Evelyn Moore

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Toronto : Montreal

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UNIT I: JIMMY, LEA AND JENA MILVAIN

This is an introduction to three Canadian children and their parents. Mr. and Mrs. Milvain, Jimmy, Lea and Jena live in the province of Alberta. As you will find out from this book, in some ways the children's everyday lives are quite different from those of most Canadian children.

In the last sentence the words "find out" were used to mean something very specific. This book will "tell" you as little as possible. Instead, you will be asked to study such things as photographs, drawings, charts, graphs and maps to "find out" ideas for yourself. Let's try it.

FIGURE 1.



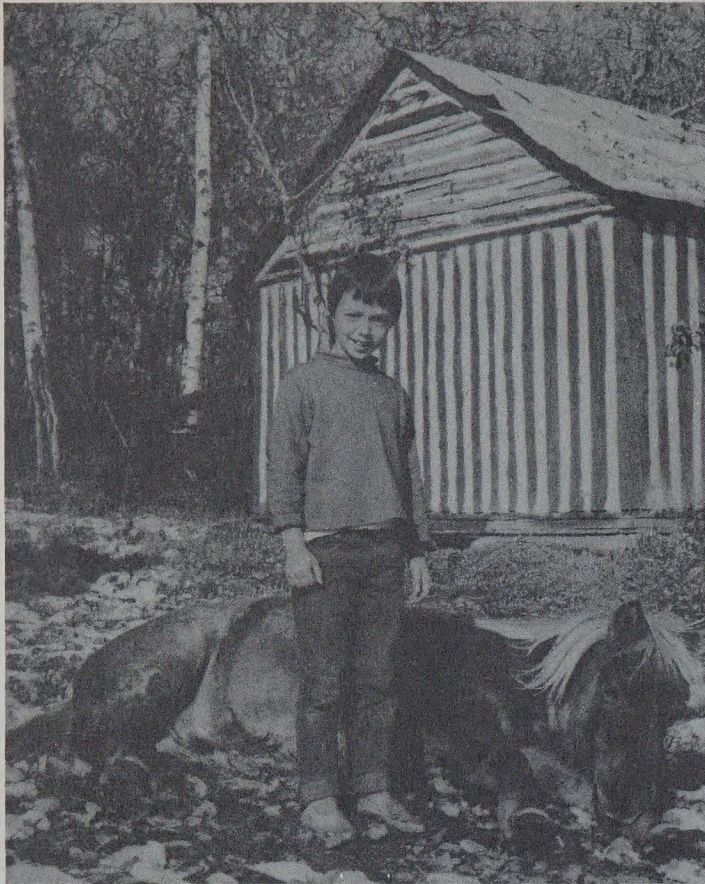


FIGURE 2.

FIGURE 3.



QUESTIONS:

Figure 1 shows Mrs. Milvain, Jimmy and Lea in front of one of the buildings of the Milvain settlement. (The writer has called the buildings and yard in which the Milvains live a “settlement” because he did not want to tell you what it is most often called. The questions that follow may help you to find its usual name.)

- (1) What do Lea’s clothing and boots suggest to you that she is about to do?
- (2) What does your answer to question (1) suggest about the Milvain settlement? (Do you know what a settlement is? Find the meaning of this word.)
- (3) What kind of material is the building in the background made of?
- (4) What (if anything) does your answer to question (3) suggest about the Milvain settlement?

Study figure 2 to find answers to these questions:

- (1) This picture shows Jena, who is the youngest. The pet that she is standing beside lives on the Milvain settlement. What sort of place would the Milvains need in order to keep such a pet?
- (2) Have you seen the building in the background in another picture? Where?
- (3) In what season of the year was this picture most likely taken?

Now turn to figure 3. This picture shows Lea riding on the Milvain property.

- (1) What words would you use to describe the shape of the land in the background of the picture?
- (2) How is the land in the foreground different from the land in the background? Which land would Mr. Milvain be most likely to own? Explain your answer.

What have you found out?

What else can be learned?

Do you agree with the following ideas? Jimmy, Lea and Jena must live in the country. This seems so because their father must own enough land to keep horses. Also, the picture of a part of the Milvain property shows open countryside and the building shown in the photographs does not look much like most city buildings. Did you suggest any of these things? Perhaps you had a better argument. If you think that you can support your ideas tell the class about them.

Have the pictures provided enough information for you to be sure that the Milvains “live” in the country? Is it possible that the family owns a settlement and property in the country but lives in the city? Is it possible that the property in the country is just outside of the city and the settlement within the edge of the city?

If you have said that it is likely that the Milvains live in the country, you have made a very simple kind of *hypothesis*. An “hypothesis” is an idea that must be tested out before it can be called true.

You will be asked to make many other hypotheses in this study. In the next section you will be able to find out if the hypothesis, “The Milvains live in the country,” is true. You will also be asked to make an hypothesis in answer to the question “How do the Milvains make a living?”

The Milvain Children

Perhaps you are especially interested in what life is like for Lea, Jena and Jimmy. If this is so, remember two things: first, this book will return to examine the children’s lives in Unit VI; second, other topics that you will study will help you to understand what life is like for the children. For example, you will study:

- (1) What Mr. Milvain does to make a living. Jimmy often helps his father with the work.
- (2) What the land in which the children work, travel and play is like.
- (3) What the Milvain home is like.
- (4) The work done by Mrs. Milvain. Lea and Jena often work and travel with their mother.
- (5) What life in the community in which the Milvains live is like.

All of these topics will help you to find out what everyday experiences you might have if you were living in this part of Canada.

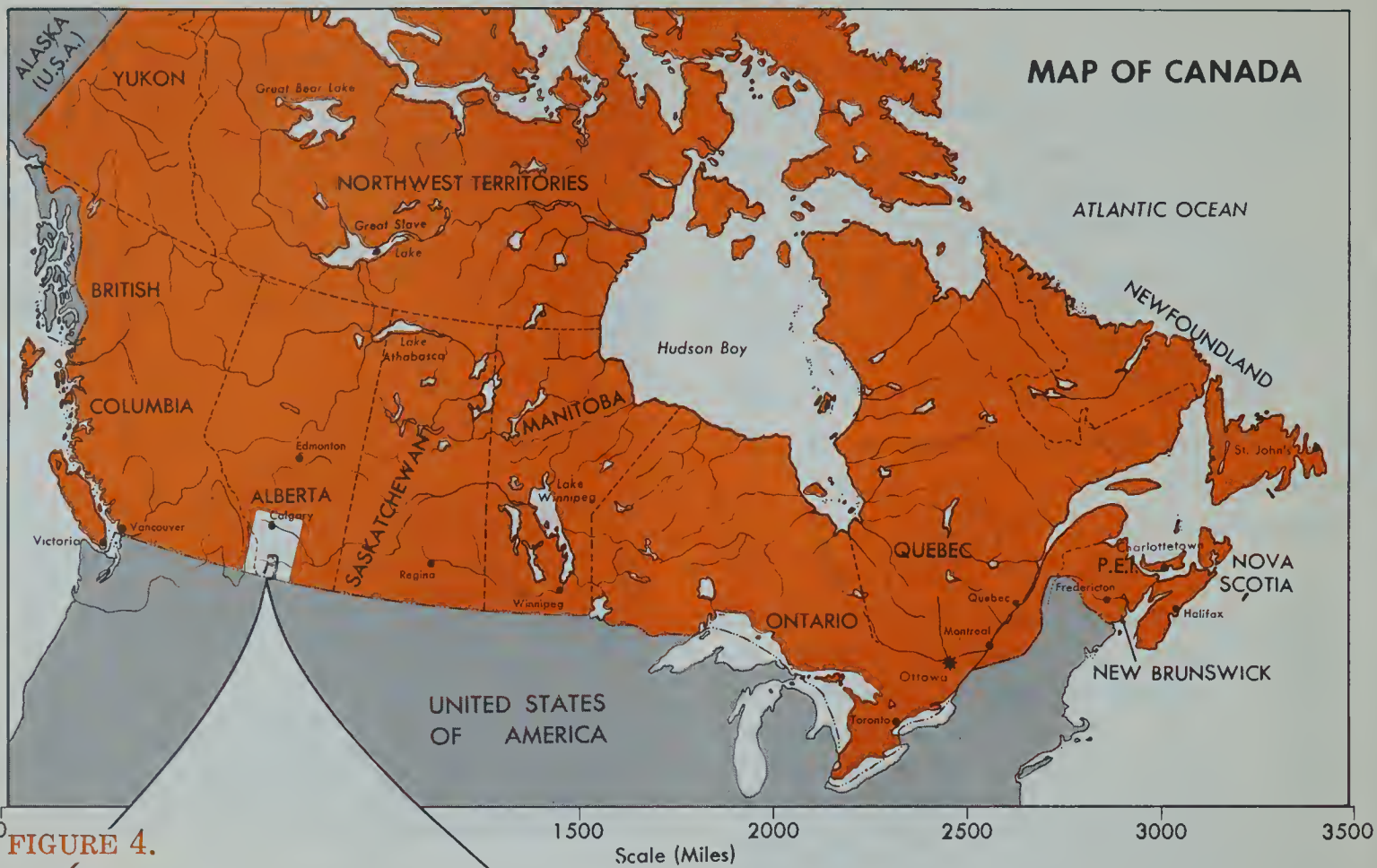
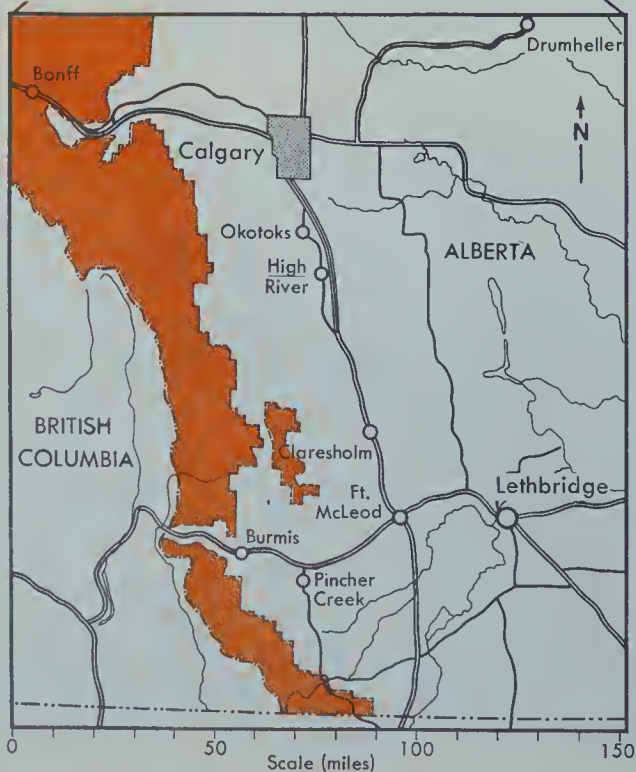


FIGURE 4.

FIGURE 5.



- ==== Four lane hard-surface highway
- ===== Two lane hard-surface highway
- Forest reserve

UNIT II: WHERE DO THE MILVAINS LIVE?

QUESTIONS:

Figures 4 and 5 are maps that show the location of the Milvain settlement. Study the maps carefully to answer the following questions:

- (1) What part of the province of Alberta does figure 5 show?
 - a) southwest
 - b) northeast
 - c) northwest
 - d) southeast
- (2) What province other than Alberta is shown on this map?
- (3) The Milvains live near the small town of Burmis. Find Burmis on figure 5. What town marked on the map is Burmis closest to?
- (4) How far by hard surface highway is it from Burmis to Calgary? To Lethbridge? To Pincher Creek? (Use the scale at the bottom of figure 5 to find an approximate answer. It would be very difficult to be exact.)

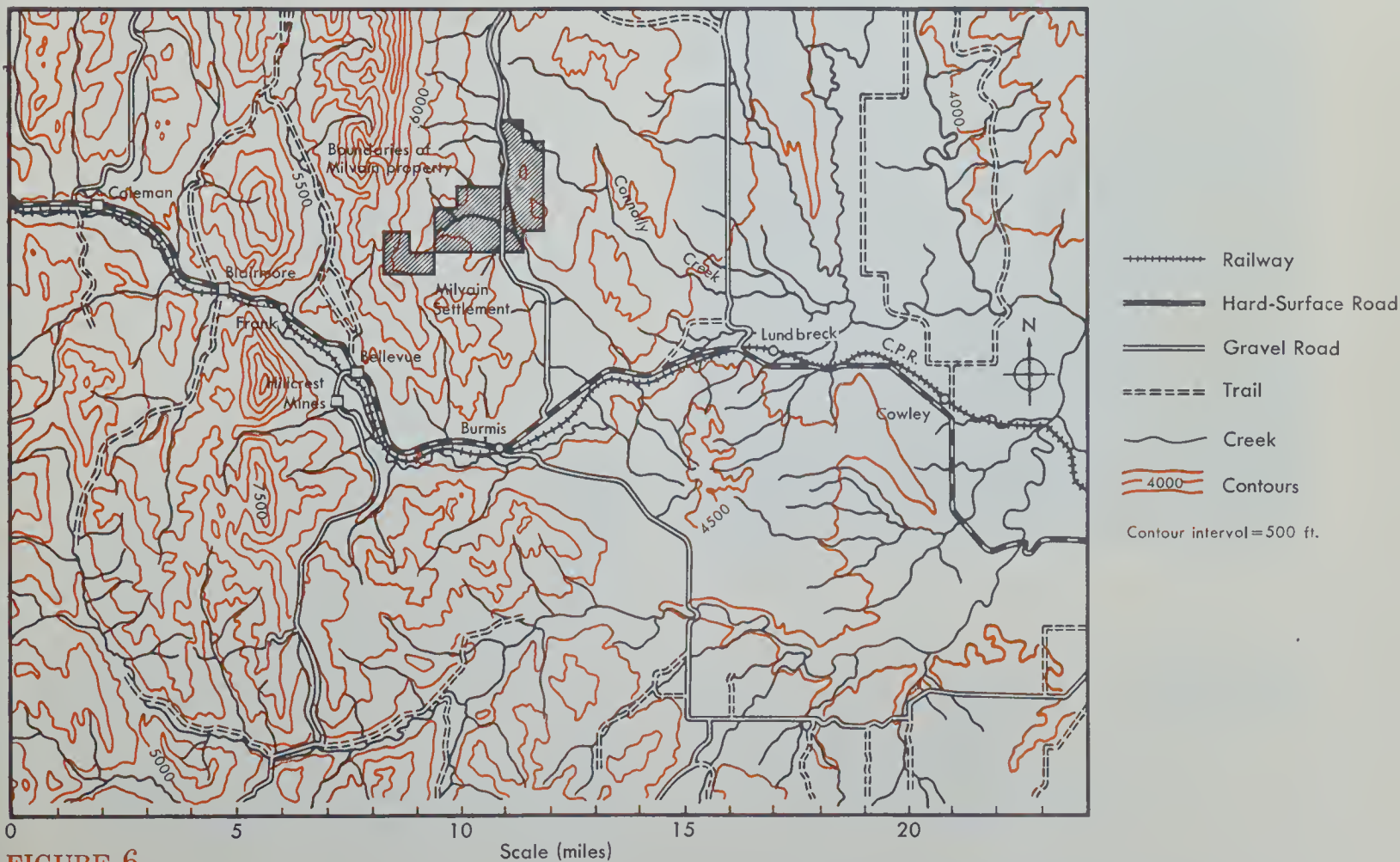


FIGURE 6.

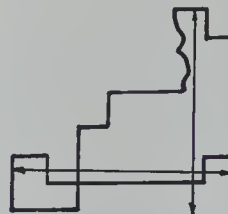
- (5) Approximately how far by hard surface road is it from Burmis to British Columbia? To the United States?

The map (figure 6) shows the area around the Milvain property. This is where the Milvains live all year round.

QUESTIONS:

- (1) Is the Milvain settlement part of a town or out in the country?

- (2) How far must the Milvains travel by all-weather road to the nearest hard surface road?
- (3) How far is it across the widest part of the Milvain property from north to south? From east to west? Use the scale on the map.



UNIT III: HOW DO THE MILVAINS MAKE A LIVING?

Now you know for certain that the Milvains live in the country. Does this mean that you know for sure “how the Milvains make a living”? Examine the figures and answer the questions that come next to see if you can make an hypothesis in answer to this question. Here are some ideas that you might consider:

Does Mr. Milvain make a living by growing corn?

Is he a lumber man?

Is he a mixed farmer?

Is he a rancher?

Is he a grain farmer?

Figure 7 shows the settlement and some of the land owned by the Milvain family. It is in this area that the children spend much of their time.

QUESTIONS:

- (1) How many buildings can you see on the Milvain settlement? (Use the drawing on the next page to help you identify which shapes are buildings. The settlement is in the right centre-ground of the photograph.)
- (2) Why are there so many buildings?
- (3) In what words would you describe the yard? What reasons would you give to explain the size of the yard?
- (4) Which of the following words would you use to describe most of the land shown in the picture?
 - a) rough and rolling
 - b) very smooth or level



FIGURE 7.

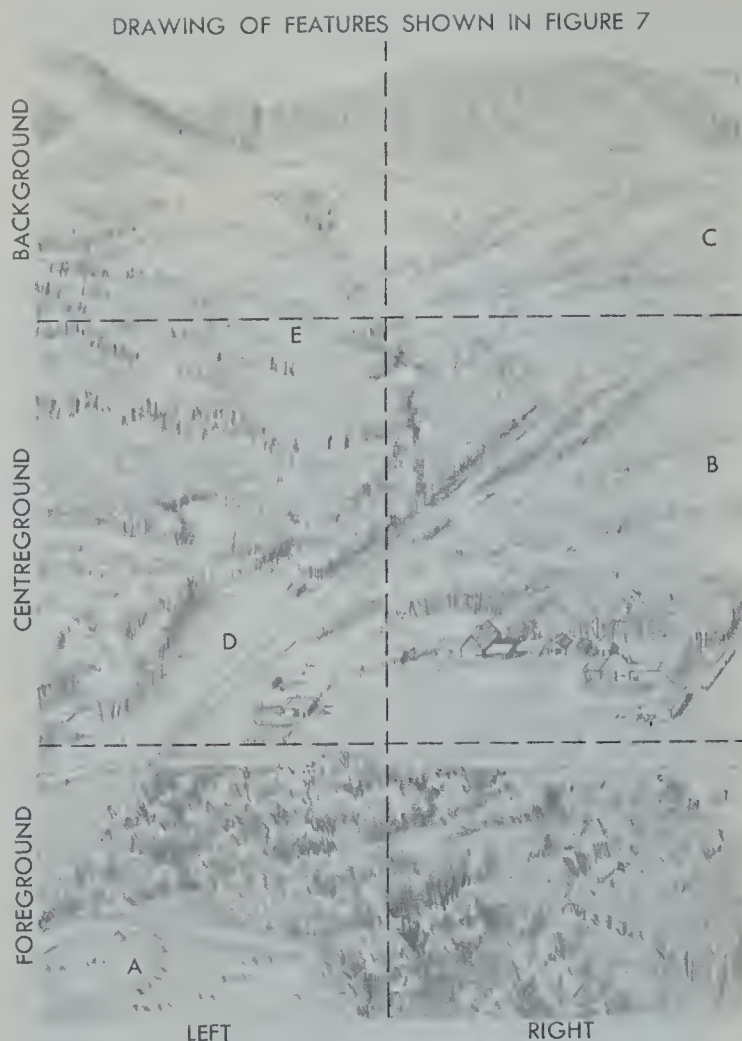


FIGURE 8.

- (5) Find the areas covered by trees. There are two basic kinds of trees:
- broadleaf (deciduous)
 - needleleaf (coniferous)
- Which type of tree is most common in the foreground? In the background?

(6) Why does the open space in the foreground (A) have parallel lines on it?

- (7) Which of the following terms best describe this open space (A)?
- grassland
 - forest
 - cultivated land
 - none of these

Give reasons for your answer.

- (8) Which terms best describe the places marked (C), (D), (E)?
- grassland
 - forest
 - cultivated land
 - none of these

- (9) What is most of the property in the picture most likely used for?
- growing grain
 - growing vegetables
 - grazing cattle
 - growing trees

Give reasons for your answer.

Figure 9 is a photograph of the inside of one of the buildings on the Milvain settlement. The person who wrote this book selected this photograph because it shows much evidence of Mr. Milvain's occupation. The problem for you may be to recognize unfamiliar objects. Study the picture carefully. The things listed (a), (b), (c), and (d) offer important clues.

FIGURE 9.



QUESTIONS:

(1) What things appear to be marked:

- a) c)
- b) d)

Be ready to explain why you have given these things these names.

(2) What might the evidence in the picture indicate about:

- a) how the Milvains obtain beef,
- b) what the Milvains sometimes wear,
- c) how the Milvains sometimes travel.

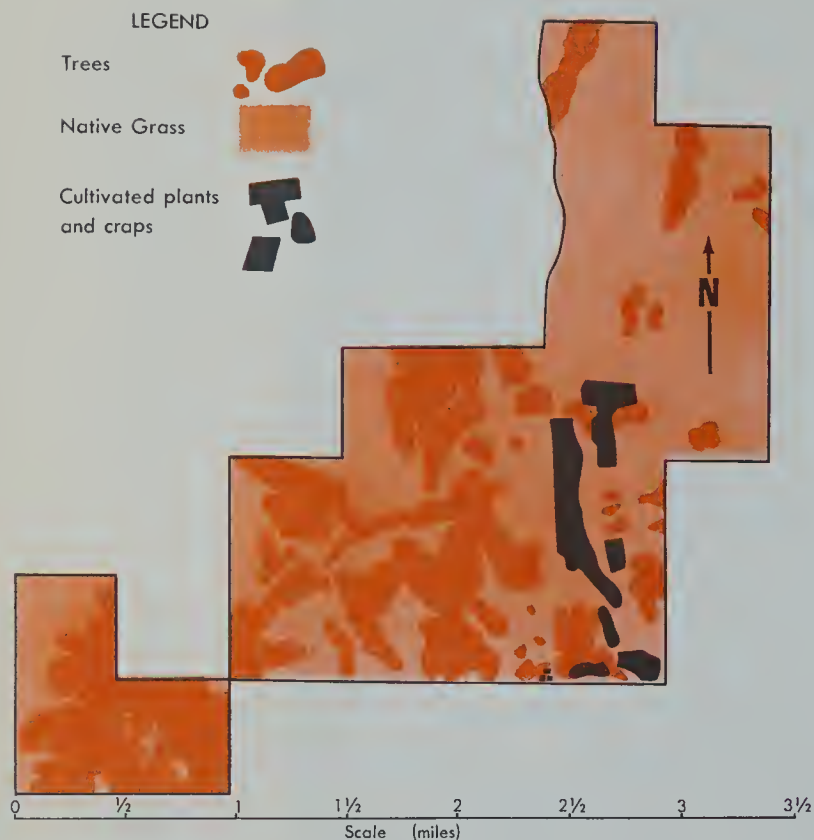


FIGURE 10.

Figure 10 shows the plants that cover the Milvain property.

- (1) What type of plant covers the largest area?
- (2) What type covers the smallest area?
- (3) Approximately what fraction of the land is cultivated?
 - a) $\frac{1}{100}$
 - b) $\frac{1}{2}$
 - c) $\frac{1}{20}$
 - d) $\frac{3}{4}$

- (4) What might most of the land be used for?

Now you should be ready to state your hypothesis carefully. Write it down. Define all of the words that you use. If you have made the following hypothesis: "Mr. Milvain makes a living by fruit farming" —be sure that you have found a clear definition of "fruit farming."

What have you found out?

What else can be learned?

Jena, Lea and Jimmy live on a ranch near the rugged mountains of Southern Alberta. Much of the ranch land is rough or rugged also. Trees and open grasslands surround their home. Some of the land near the ranch is cultivated. Was your hypothesis correct?

Mr. Milvain raises cattle which feed on grass and other small plants that grow in open areas, or underneath the trees.

The next unit will provide evidence of what life is like on the Milvain settlement. For the rest of this book the ranch settlement will be called a ranchstead.

Perhaps at least one thing has puzzled you: Why is the Milvain place called a cattle ranch rather than a cattle farm? This is a question that you should try to answer as you study the units that follow.

UNIT IV: THE SETTLEMENT

The next four figures show the Milvain ranchstead. The first three are photographs that have been taken at different angles over the buildings. The drawing, figure 11, below shows how this was done.

Figure 16 is a map made from the photograph taken above the ranchstead (figure 15). Study all of these figures carefully. You will be able to discover many things about the Milvains; also you may learn more about how maps are made and what maps show.

The ground level photograph

Figure 12 shows Lea and her father. Lea is preparing for a horseback ride.

Mr. Milvain has helped her saddle her favorite horse.

QUESTIONS:

- (1) What is different about the ground in the foreground (inside the tall fence) when compared to the rest of the yard? How would you explain the difference?
- (2) Of what materials has the tall fence been constructed? Why has it been made so high and so sturdy? What might this part of the ranchstead be called? What is it probably used for?

FIGURE 11.

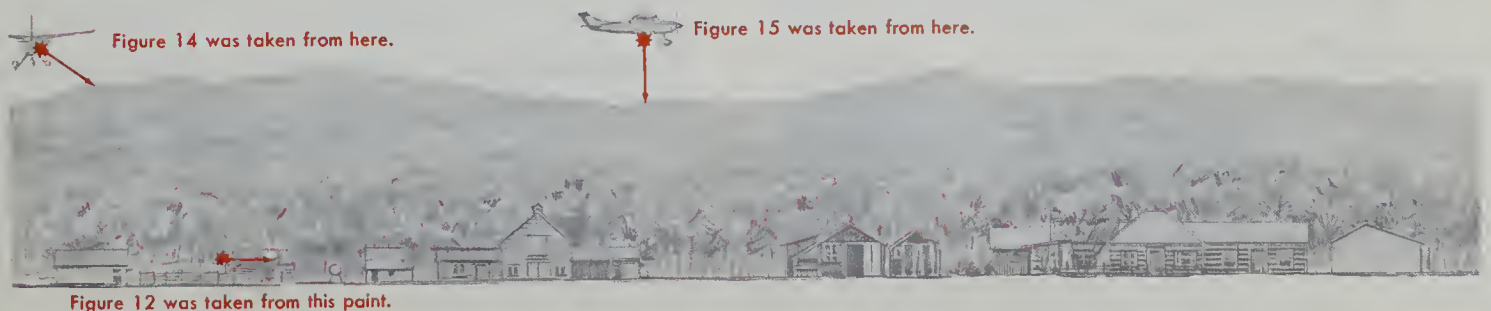




FIGURE 12.

- (3) Which building is most likely to be the house in which the Milvains live?
- (4) What would the large building in the left background be used for?
- (5) Do the Milvains appear to have electric power or a telephone in their home?

The photograph from above and to the side of the ranchstead

Study figure 14. Compare it to figures 12 and 13.

QUESTIONS:

- (1) Find what is probably the Milvain house in both photographs. What number is the house?
- (2) The ranchstead has at least 8 fair-sized buildings—and many more small ones. It would not be possible to suggest uses for all of them. Try to identify as many as you can anyway. (Probably you will be guessing about most of them.)

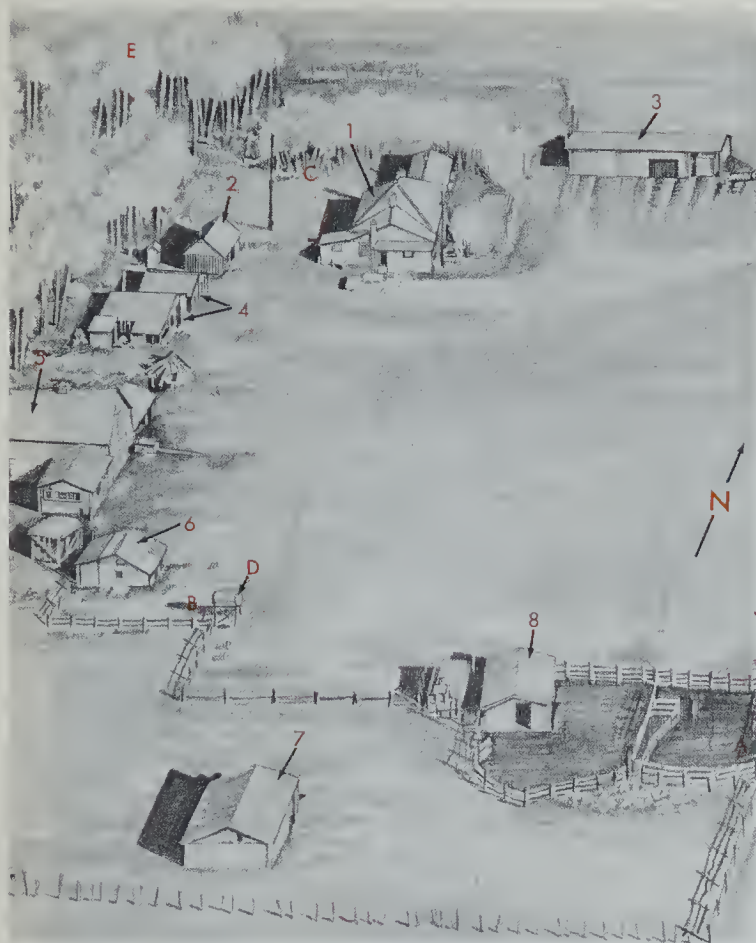


FIGURE 13.



FIGURE 14.

- (3) What might the tank on a stand, D, be used for?
- (4) What would the large yard in the centre-ground be used for?
- (5) Why is the yard surrounded by a fence?
- (6) The road that runs along the right side of the picture is probably best described as:
 - a) a rough trail
 - b) a 2 lane hard surface road

- c) a gravelled all-weather road
- d) a narrow trail

Check figure 6 to find the type of road that runs past the ranchstead.

The ranchstead from above

The photograph, figure 15, shows the ranchstead from above. The map, (figure 16), has been made by copying parts of the photograph. Many maps are made in this way.



FIGURE 15.

QUESTIONS:

- (1) Find the building marked 2 on the map. What building is this? (Check the legend.)
- (2) Point to the building in figure 15. In figure 14. (It is marked 2 on the drawing beside the photograph.) Point to the same building in figure 12.
- (3) Probably you have noticed that this building is shown as follows in:

Figure 12



Figure 15

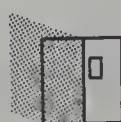


Figure 14



Figure 16 (map)



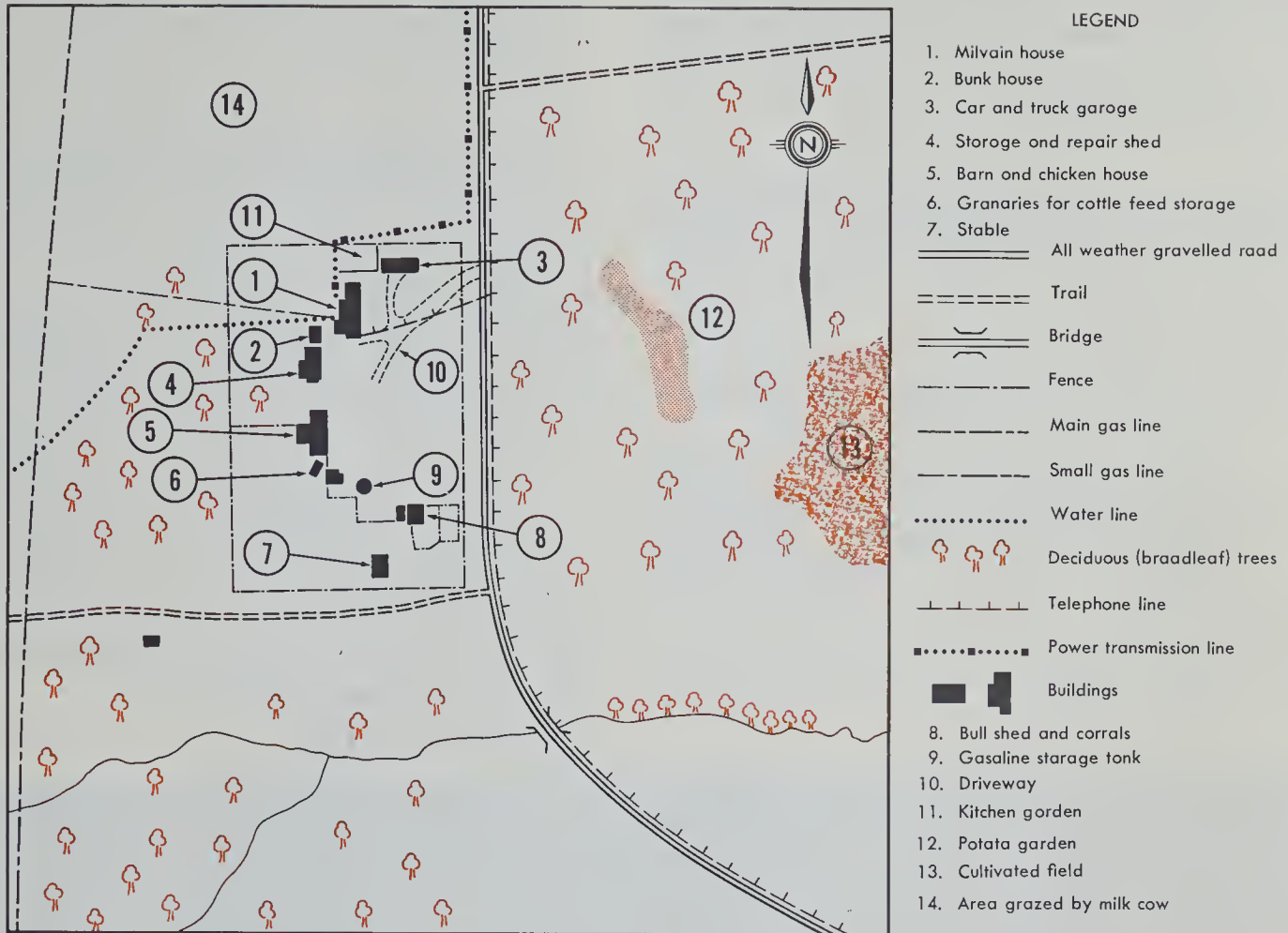


FIGURE 16.

Which answer is correct?: The map shows the shape (not the shadow) of building as it looks:

- a) from the side?
- b) from above?

- (4) Make simple drawings of the following features as they appear on the figures 12, 14 and 16.

The Barn and Chicken House

The fence near the bullshed (corral fence)

The trees west of the building

- (5) Make simple drawings of the following things as they appear in figures 7, 14 and 16.

The cultivated field across the road from the ranchstead

Milvain Creek

- (6) Which feature shown on the map is clearly not outlined as it would look from above? (barn? fence? trees? fields? creek?)

Look at the map again. Study the legend carefully to answer these questions:

QUESTIONS:

- (1) Look back at question 2 for figure 13, page 12. Check your answers.
- (2) The map shows that the ranchstead is located close to fields, a road and a stream. What are possible reasons for this?
- (3) What modern services do the Milvains have in their home?
- (4) Does Mr. Milvain hire men to help him with the work?
- (5) Use tracing paper to draw a line around all of the buildings used to shelter and feed the animals. Draw another line around the buildings in

which the people live, store or repair machines, and work. Why are the buildings located in this way?

- (6) What jobs might be done on the Milvain ranchstead? (Study the map to find clues that will help you answer this question.) List as many jobs as you can think of.
- (7) When we want to know of what use something is we ask what its “function” is. When something is helpful or useful we say it is functional. Make a chart like the one below to show the function of the Milvain buildings.

What Have You Found Out About the Milvain Ranchstead?

The ranchstead is the centre for storage, maintenance and shelter on the ranch. It has many buildings. Each building has a purpose. The house and bunkhouse provide living quarters for the family and men hired to do ranch work. Workshops

FUNCTION

STORAGE				SHELTER		
	MACHINES	OTHER EQUIPMENT	CATTLE FEED	CARE OF EQUIPMENT	FOR ANIMALS	FOR PEOPLE
B U I L D I N G S						

house tools. Storage sheds protect machines, cattle feed and other equipment. Other sheds provide convenient places for the care of equipment.

The ranchstead is sprawling in appearance. (It has a big yard with buildings spread over it.) The huge yard is very useful. It provides a storage area for equipment; also, it has made it possible to build animal quarters far from the house to avoid disagreeable smells and noise.

Many of the buildings seem old and run down, but most are still used.

Although the ranchstead looks very different from city homes, it has much in common with the city. The ranchstead

has running water, natural gas, electricity and a telephone. A road good enough for modern cars to travel on in all but the worst winter weather connects the ranch to towns and cities.

The ranch is located close to an all-weather road, a stream and cultivated fields for good reasons. Trails from ranchsteads to main roads can easily become impassable. The stream provides water and the fields provide feed for the cattle.

What Have You Learned About Aerial Photographs and Maps?

This photograph (figure 17) has been put into this book because it shows a

· **FIGURE 17.**



representative foothills ranchstead. (The ranchstead is called representative because it is like most ranchsteads in the foothills of Southern Alberta.)

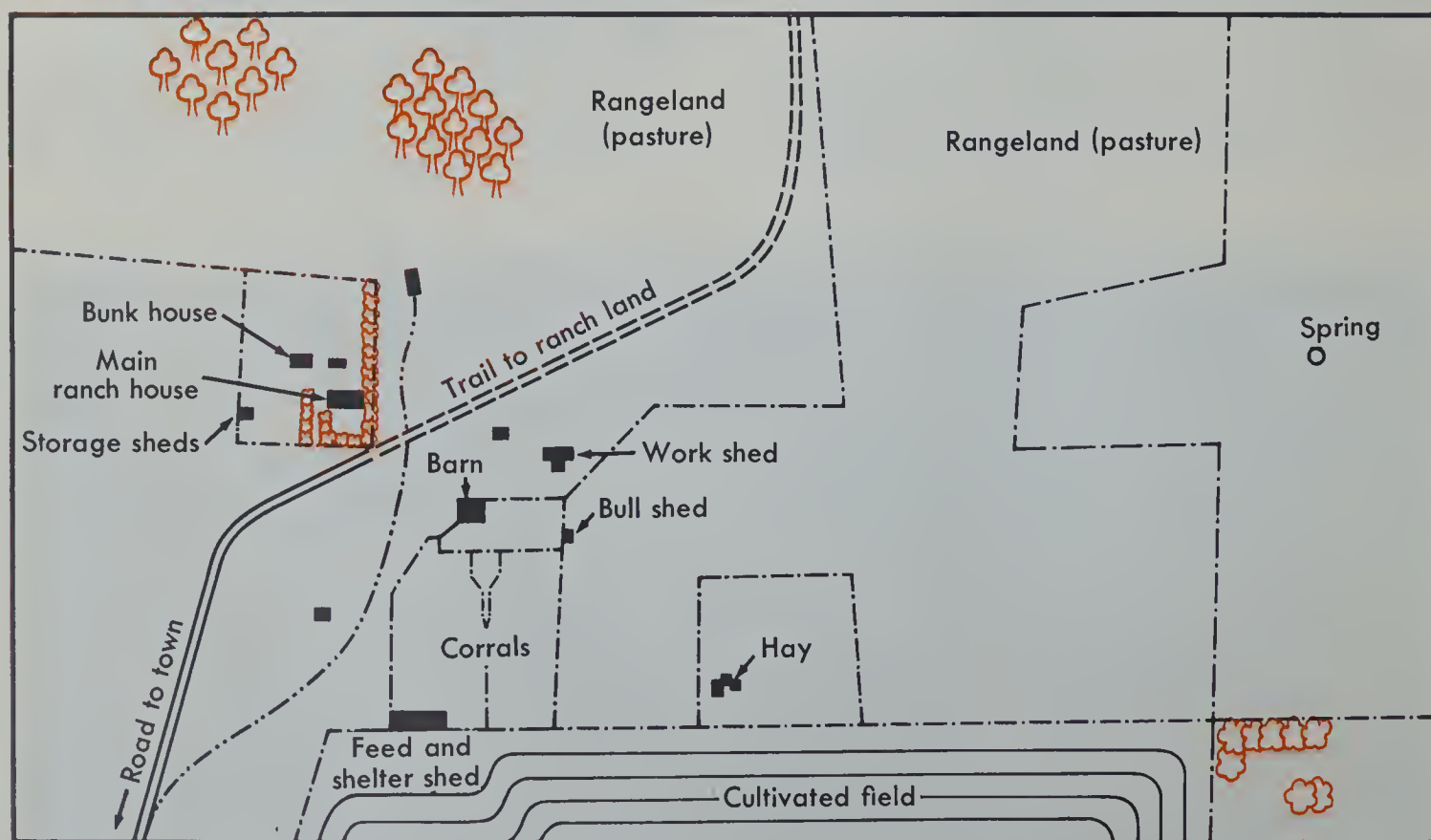
Use tracing paper to make a map of this ranchstead. Use the symbols given on figure 16, but make your own tree symbol to look like "trees from above." Use number and arrows to name the buildings you think that you can identify.

At the bottom of this page you will find a map of the ranchstead. In what ways is

your map the same? Have you used the same map symbols? What features in the Milvain ranchstead are representative of ranchsteads in the region?

Mr. Milvain uses his land to raise cattle. Cattle graze on grass that grows on rangeland and feed on hay, green feed or grain that is raised on cultivated land. The photographs and maps that you will study next show the ranch land and how it is used by the Milvains.

FIGURE 18.



UNIT V: THE LAND AND THE LIVESTOCK



FIGURE 19. Cattle from the Milvain herd and other herds being driven through rugged country.

The Surface Of The Land

The next map (figure 20) has contour lines that show the shape of the surface of the Milvain land.

QUESTIONS:

- (1) Put tracing paper over the map. Trace the outline of the ranch. Mark a small 1 on the top of a hill that is on the ranch. Mark a small 2 on one of the steepest places on the ranch. Mark a small 3 on one of the most level places on the ranch.
- (2) Study the contour lines on the part of the map that shows the Milvain ranch. Which of the following best describes the ranch land?
 - a) mostly very flat land
 - b) all flat land
 - c) all steep mountainous land
 - d) mostly hilly and mountainous land
- (3) Put the tracing paper on the map again. Colour the places on the ranch where Mr. Milvain would be most likely to grow crops. Give reasons for your answer.

FIGURE 20.



- (4) Find the Livingstone Range. How high above the ranchstead is the tallest peak shown on the map?
- (5) Trace the contour lines that show the foothill ridge that runs along the east side of the Milvain property. Which words best describe this ridge?
 - a) low and gradually sloping
 - b) high and steep sided
- (6) Why does the road from the ranch to the town of Bellevue take such a crooked route? Why is it not built in a straight line from the ranch to the town?



Milvain cattle on ranchland

The Valley In Which the Milvains Live

The drawing on the next page (figure 21) shows part of the Milvain ranch.

QUESTIONS:

The children

- (1) The children play and work on the land near the ranchstead. Point to the following places on the drawing and on the map just studied (figure 20):
 - a) the Milvain ranchstead.
 - b) a hill just west of the ranchstead.
The children sometimes climb this hill to get a good view of most of the valley.
 - c) tall trees just east of the ranchstead. (Trees are not shown on

the map, but point to the location. Lea and Jimmy often climb these trees in the summer months.)

- d) Rock Creek. Sometimes Jimmy tries to catch small trout in this stream.
- e) abandoned Milvain ranchstead. This is a fascinating group of old log buildings. Mr. Milvain was born in the old house. The children enjoy “poking around” here.
- (2) Put tracing paper on the map and the drawing and mark places a), b), c), d) and e).

Estimating Distances

- (3) Find the peak on the Livingstone Range with the arrow. Estimate

FIGURE 21. THE ROCK CREEK—TOD CREEK VALLEY



the distance from the ranch to this peak. Is it about:

- a) 50 miles?
- b) 5 miles?
- c) 10 miles?
- d) 100 miles?

Use the map to see if you are correct. The peak is called "South Peak."

- (4) Estimate the distance from the Milvain ranchstead to the abandoned ranchstead. Check your answer from the map.

The rangeland

- (5) Use your finger to trace the edge of the Milvain property. Use the following words to describe the property shown in the drawing. (Find out what each expression means.)

- a) rugged
- b) gently rolling
- c) flat

- (6) What other words can you think of to describe the land?

- (7) What is the ranching function of *most* of the Milvain land shown in the picture?

- (8) Look at the small map (figure 22). The grey part of the map shows the land in the drawing. The Milvain property in the drawing is:

- a) mostly the gently rolling and flat part of the ranch?
- b) mostly the rugged part of the ranch?

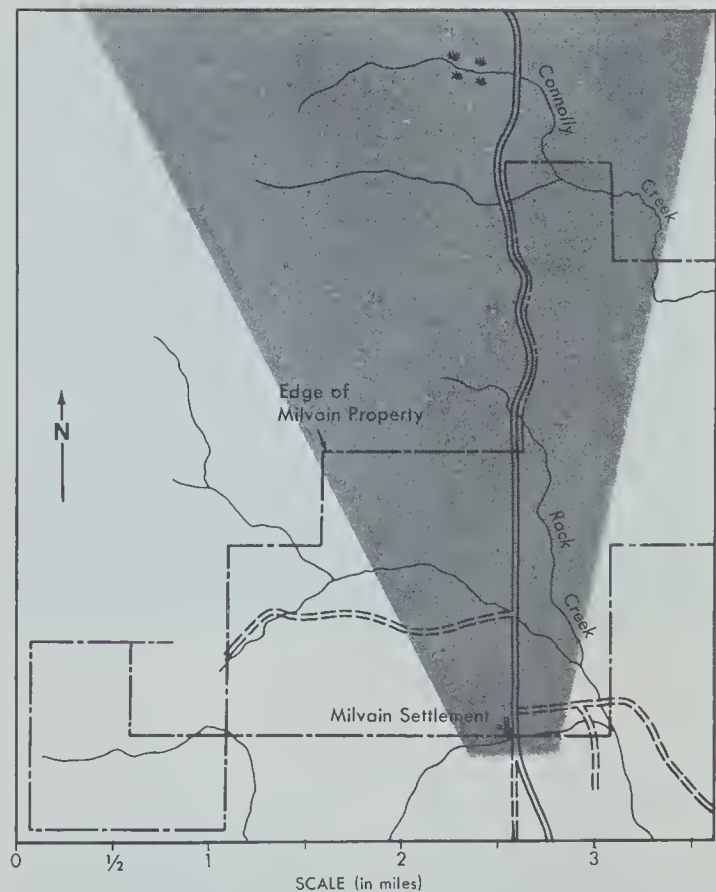


FIGURE 22.

Cultivated croplands

- (9) Open grassland usually makes better cattle grazing than tree cover. How might Mr. Milvain improve his grazing land?
- (10) What are the two chief cultivated crops shown in drawing, figure 21? What would each be used for?
- (11) On what parts of the property are cultivated crops grown?
 - a) level bottom lands

- b) steeply sloping foothill ridges
 - c) gently sloping bench lands
 - d) rolling bottom land
- (12) Use the drawing to explain why the cultivated lands are found in these places.
- (13) Which of the following things have probably caused the cultivated land to be small and irregular in shape?
- a) uneven or steeply sloping land
 - b) creek beds
 - c) grass
 - d) trees
 - e) buildings
 - f) swampy places
 - g) fences
 - h) poor soil

This question should be discussed. Be ready to give reasons for your answer.

FIGURE 23.



A Close Look at the Land and its Ranching Function

Figure 23 shows the place on the drawing (figure 21) marked A. The arrow shows the direction in which the photographer was pointing his camera. Use both the photograph and the drawing to answer the questions.

QUESTIONS:

- (1) What are the mountains in the background called?
- (2) What is the land in the middle-ground probably used for? Why hasn't this land been made into cultivated fields?
- (3) Study the land at the front of the picture. What seems to have happened to this land? Explain your answer.

FIGURE 24.



Turn to page 28. Study the first drawing. Were your answers correct?

The next photograph (figure 24) shows the place on the drawing marked B. The arrow shows that the camera was pointed south to take the picture.

QUESTIONS:

- (1) What crops are shown in the photograph?
- (2) What has produced the shapes toward the front of the picture?
- (3) What has caused the shapes in the middle-ground?
- (4) Why has Mr. Milvain chosen this place for cultivated land?
- (5) The row of trees behind the field are growing along Connelly Creek. Why do trees grow along the creek?
- (6) What is the land behind the trees called?

Turn to page 29. Study the first drawing to check your answers.

Figure 25 shows hired men operating the Milvain binder.

QUESTIONS:

- (1) Use tracing paper to make a quick sketch of the photograph. Label the following things:
 - a) the abandoned ranchstead
 - b) two levels of sloping benchlands
 - c) bundles coming out of the binder



FIGURE 25.

- d) evergreen trees on the steep and high slopes
 - e) places where bare rock sticks out of the side of the foothill ridge (outcroppings).
- (2) What might happen if the men tried to use the binder to harvest a crop growing on the upper slopes of the ridge? Could crops be planted in such a place?

The photograph that comes next (figure 26) is of a cattle feeding place. This is where Mr. Milvain brings hay, greenfeed, grain or salt to feed his cattle during the winter months.

QUESTIONS:

- (1) Use tracing paper as above to label the following:
 - a) dense grove of trees



FIGURE 26.

- b) corral
- c) stream

- (2) What functions might trees, a corral and a stream serve at a cattle feeding place?

What have you found out?

What else should you know?

The Milvain ranch has been designed to be an efficient living place for cattle. Do you know what “efficient” means? This is an important word. Find a definition of it. Discuss “efficiency” with

your teacher and class. Which of the following two students was acting most efficiently?

DOING AN ASSIGNMENT

John did not listen carefully when the teacher explained the assignment. When he tried to do the project at home he could not remember exactly what should be done so he tried something that he thought should be “good enough.” While working he turned on the television, invited a friend in to talk, stretched out on the sofa and forgot to turn on enough light. It was late in the evening before he finished what he was doing.

Fred took careful notes on the assignment. When he got home after school he sat down at a desk in a quiet place and completed the work before supper. After supper he had plenty of time to watch television and talk with friends.

This is one example of efficiency. Can you provide your class with other examples? Does efficiency involve doing as much as possible while using as little time as possible; using as little effort as possible? What else could be involved?

Efficient Land Use

Most of the Milvain ranch is in a valley located between the rugged “Livingstone Range” and a steep sided foothills ridge. Mr. Milvain has laid out his pastures and fields to be as efficient as possible in producing cattle feed, in guarding his cattle from danger, and in conserving his land. How does he do this?

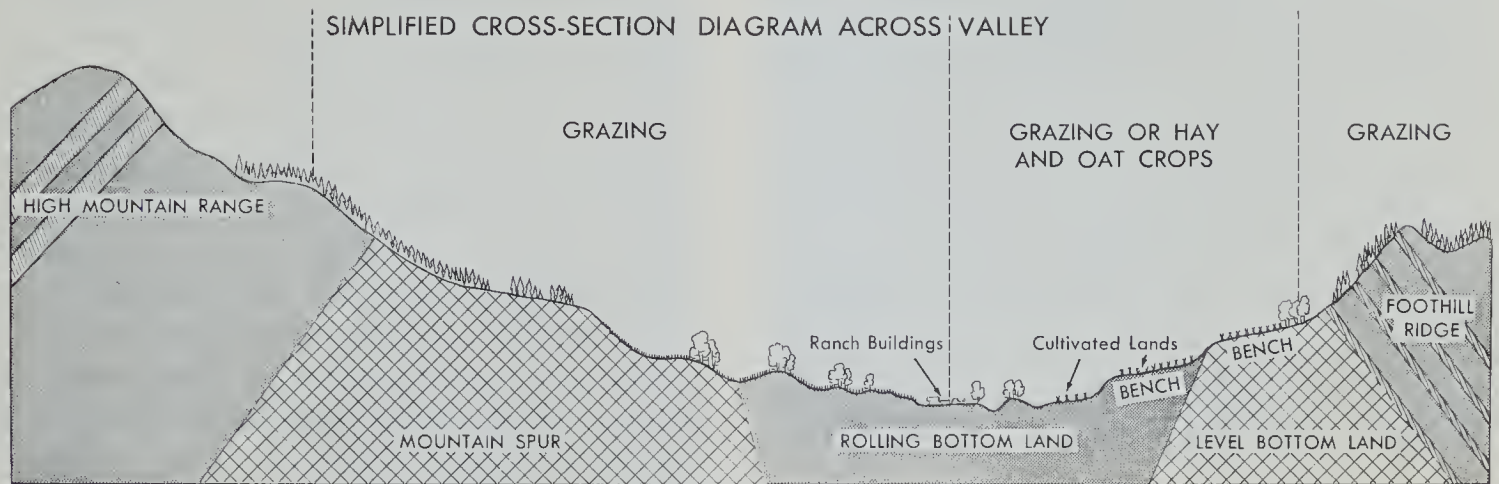


FIGURE 27.

Figure 27 should help you to understand how Mr. Milvain uses his land efficiently to produce cattle feed. You can see that he has cultivated the flattest places, which are bottom lands and benchlands. Machines cost less to use, travel faster, are less likely to tip over or become stuck on flat land.

On reasonably flat places, which have soils unsuited to growing crops or which are too small for efficient use of machines, Mr. Milvain cuts the tall native grass and makes native hay.

The more rugged lands are used for grazing. These areas are covered by native grasses, shrubs or trees and are called "range." The "native grass" cover is excellent cattle feed. Where trees and shrubs are widespread the "range" is not

as good. The grasses and other edible plants that grow under trees are not as nutritious* for cattle.

The drawing, figure 28, is an example of range land. The land in the middle-ground is an example of good grazing land: it is too rough for cultivation but gentle enough for easy grazing by cattle.

It is also an example of two land conservation problems. First, the grass in the foreground has been damaged by livestock. Cattle have spent too much time in this place and have grazed the grass too close to the ground. Ranchers would say that this grass has been "overgrazed." Figure 29 shows what happens to grass that has been treated in this way.

*Do you know what nutritious food is? Find the meaning of this term.



FIGURE 28.

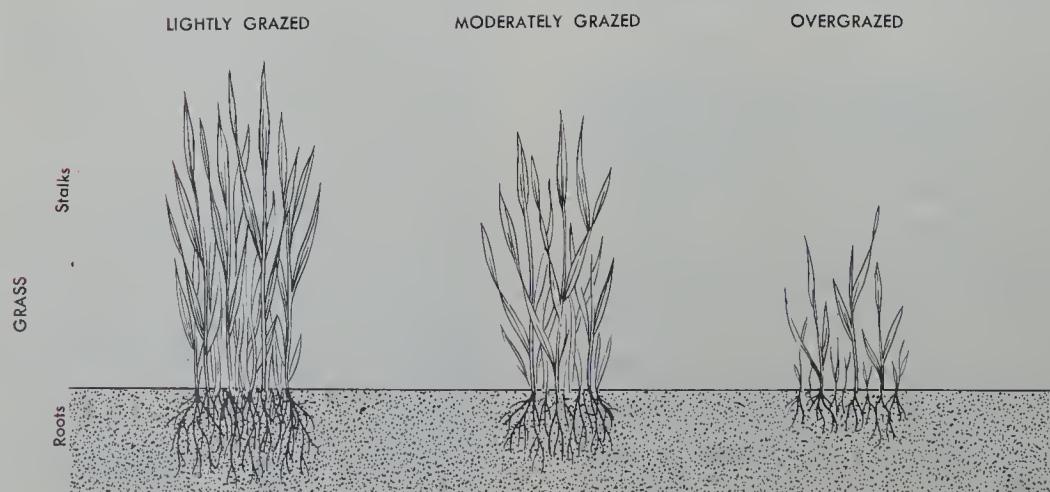
The overgrazed grass has been grazed too often and at the wrong time of the year. The stalks have not been able to grow and produce food and the roots have withered away.

The grass shown in the drawing of Milvain land has died and the bare soil has been left open to erosion. Mr. Milvain works hard to prevent over-grazing. He keeps his cattle off the grass during the season when it is most easily killed. He puts up fences, builds new water holes and changes feeding places to move cattle away from places where the grass has been weakened.

Second, the drawing shows a lot of brush. Brush kills grass and causes less valuable plants to grow. Mr. Milvain uses a special tractor and a bulldozer blade to destroy some of the brush on his land. Is prevention of over-grazing and control of brush an example of efficient use of grazing land? Why?

The fields in the drawing, figure 30, are located on flat bottom land. Mr. Milvain

FIGURE 29.



uses this area efficiently by growing hay, oats or wheat on all of the flattest places that have good soil.

Mr. Milvain has used an “old fashioned” farming machine called a “binder” to cut oat plants and tie them into bundles. Why do you suppose he has not bought an expensive modern machine to work upon his small fields?

Figure 31 shows the Milvain binder at work. It also shows the steep and rocky foothill slopes very clearly. Figures 30 and 31 together provide evidence that helps to explain why the fields are so small and irregular in shape: creeks meander back and forth across the flat places; ridges and terraces take up much space.

Figure 32 is a drawing of one of the winter cattle feeding places on the ranch. Mr. Milvain has set up several feeding places like this one. They are distributed over the ranch to prevent cattle from overgrazing on one area.

Each cattle feeding place also usually serves to prevent cattle from wandering too far away from the road during storms and each is a convenient place to feed cattle and care for calves. For these reasons feeding sites are located:

- (1) near gently rolling land that Mr. Milvain can easily travel across in search of calves and cows.
- (2) near dense groves of trees or old buildings that offer the cattle shelter.
- (3) near a road that permits the easy transport of feed.
- (4) at a dependable stream or spring. Cattle require plenty of water.



FIGURE 30.

FIGURE 31.

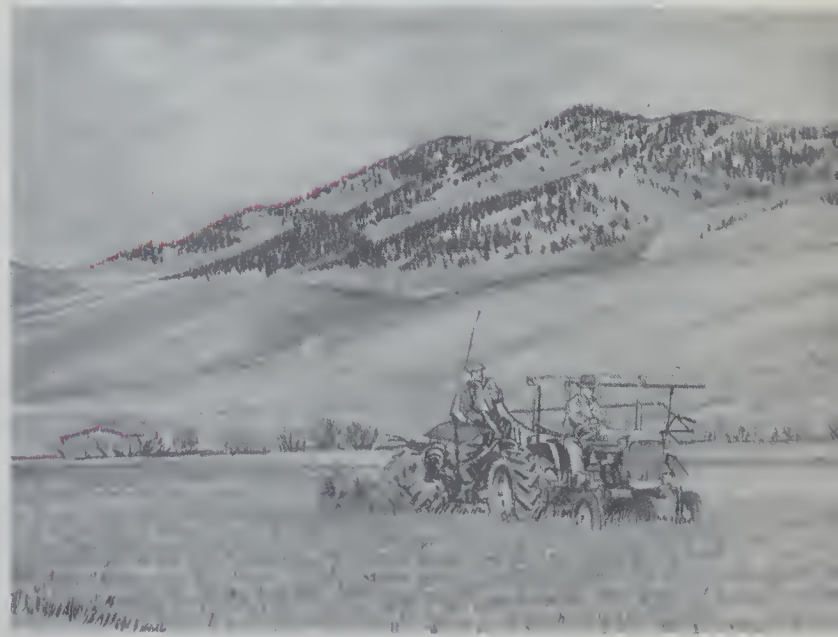




FIGURE 32.

Mr. Milvain conserves his soil as well as his grass. He knows that each crop of wheat or oats that he grows takes things needed for the growing of plants (plant nutrients) out of the soil.

To avoid “robbing” his soil in this way, he uses a “crop rotation plan.” Mr. Milvain explains that it works in the following way:

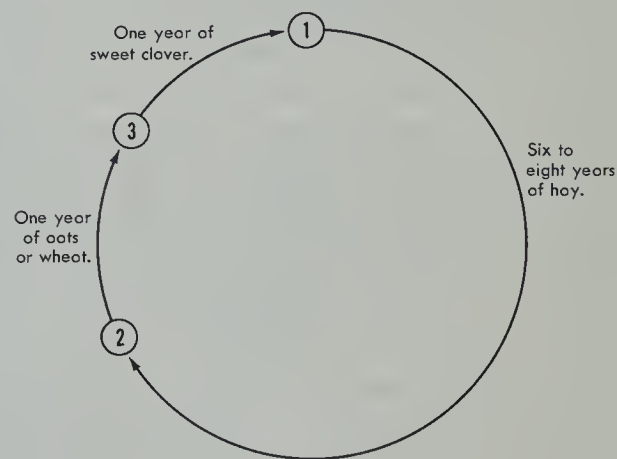
“First, I plant hay (alfalfa, brome grass, sweet clover) and let it grow for 6-8 years or so. That is, each year I cut the hay but let the roots stay in the ground to send up new plants in the next year. When the 6-8 years are passed I plow the roots and plants back into the soil to provide plant nutrients.

Second, for one year I grow either oats

or wheat to provide extra feed for my cattle. Unfortunately, however, these crops take valuable plant nutrients from the soil.

Third, I grow sweet clover alone for one year. Then I plow it into the land in the fall. This puts even more valuable plant nutrients into the soil.”

The rotation plan looks like this:



Efficient Cattle Production

The next unit will help you to understand much more about how cattle are produced on the ranch. But, since you are studying about efficiency in this unit, a few ideas about “efficient” cattle production are given below in an interview with Mr. Milvain. Read the interview to find out how Mr. Milvain has developed a plan for efficient cattle production.

Question: You have told me about how you protect your “range” and soil from overgrazing and overcropping.* I would

*What does “overcropping” mean? Discuss this question with your teacher and class.

call this “long term efficiency” because you are preventing the grass and soil from being destroyed “in the long run.” But what about “short term efficiency”? How do you produce cattle as efficiently as possible each year?

Mr. Milvain's answer: I guess you mean: how do I produce as many healthy and fat cattle as possible each year without spending too much on feed or damaging my land? Well . . . I have a grazing and feeding plan. In the winter months I haul feed to the cattle to add to the native grass and other plants they eat off the land. These extra foods usually keep the cattle fat and healthy, providing extra energy and vitamins or minerals that are not found in the native plants on the range. I believe that I get more beef on each animal in this way and I lose fewer cows and calves during storms. In short, I make more money.

In the summer I put much of my herd on land I rent from the Government. (*You will read about the Forest Reserve in the next unit.*) This protects my own land from overgrazing and provides good rich grass for the cattle.

In the fall I put the cattle that I want to sell to graze on rented croplands that have been planted for fall grazing. This fattens my cattle even more.

I do many other things to make sure that my cattle are worth as much money as possible when I sell them. Have I told you enough?



FIGURE 33. Men on horseback driving the cattle.

QUESTION:

Do you understand the difference between long term efficiency and short term efficiency? What examples can you give of long term efficiency in school work? Of short term efficiency in school work?

UNIT VI: LIFE FOR THE FAMILY

Mr. Milvain and Freddy Lee

Running an efficient cattle ranch requires steady work. To understand what life is like for the men on the ranch you must know about the work they do from early in the morning until early in the evening, seven days a week. Mr. Milvain says, “to stand up to ranch life you must enjoy the work!”

FIGURE 34.

Mr. Milvain took charge of the ranch when his father retired. He has been a rancher for more than 30 years.



Ranch Work for the Men

Figures 36 and 37 show some of the work done by Mr. Milvain, Freddy Lee and other “hired men.”

Figure 36 contains pictures of men doing handwork, work on horseback or work that requires much thinking and knowledge. This type of work takes many hours of labour. It is not the sort of work that can readily be done by men operating machines.

FIGURE 35.

Freddy Lee is the Milvain's full time hired man. He once said to the author of this book, “I have worked for the Milvain's for only a little while—about 50 years.” He is considered a member of the Milvain family. Freddy is of Canadian Indian descent.



FIGURE 36.

WORK DONE BY MEN AND HORSES

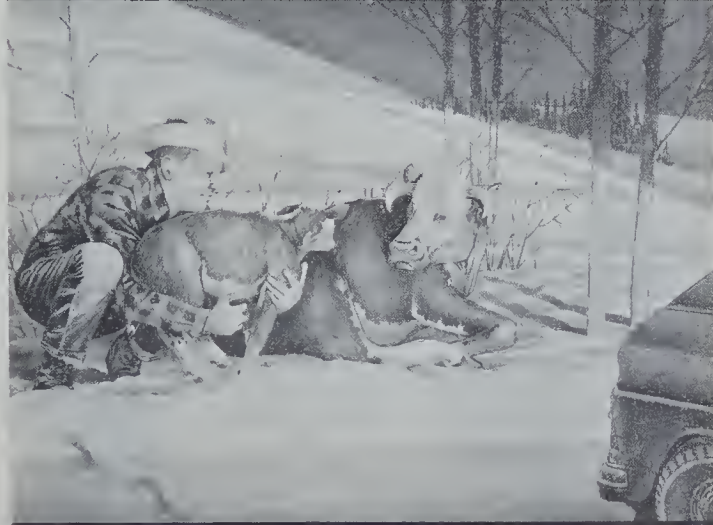


a)

Especially in the early spring, cows are checked very carefully to see if they are healthy and to find out if they are ready to give birth to a calf.

After the calf is born both the cow and calf are inspected often to make sure that the calf lives. A record is kept of cows that give birth to small or weak calves.

Yearlings (young cattle) are also checked carefully throughout the fall, winter and spring to see if they are gaining weight properly.



b)

Calves are born in the spring. Mr. Milvain and Freddy work “day and night” to check the cows and calves. When blizzards or extreme cold comes in the spring the work days may be terribly difficult, unpleasant and very long.



c)

The young calves are marked with the Milvain “brand” (6n—) so that they may be identified as Milvain cattle. Mr. Milvain still uses ropes and does this work by hand. Many ranchers now use more modern procedures. Can you find out what modern ways of branding have been invented?



d)

Also in the spring, the young calves are given medical care. It is most important to inoculate them against disease.



e)

In the summer the cows and calves are kept in the ranch, but most of the yearlings are driven to the forest reserve (rough country owned by the Government but used by the ranchers for the summer). In the fall the Milvain yearlings and a great many cattle from other ranches are rounded up, driven to a cutting out place (where each rancher "cuts out" his cattle) and herded back to the ranch.



f)

Haying is a late summer job. Much of the haying work is done by men operating large motor driven machines. A lot of the work is still done by hand. Men must carefully pile the round bales of hay or stack loose hay.



g)

Stooking must be done in the early fall. Oats and wheat crops are cut and tied into bundles by a machine. The bundles must then be piled together into stooks so that the plants will "dry out." Why must the plants be allowed to dry?



h)

In both the fall and spring the cattle (yearlings and a few old cows) are prepared for market by being driven into large corrals and branded, vaccinated, dehorned, inspected, etc. Finally they are driven into hired large trucks called "cattle liners" and taken to "stock markets."



i)

During the winter months, feed (hay, greenfeed, and some chopped oats or wheat) is brought to feeding places and given to the cattle. Though the cattle could stay alive during most winters by eating native grass, Mr. Milvain feeds them steadily.



j)

Fence repairing must be done whenever fences are broken. This most often happens in the winter and early spring when wild animals (elk in particular) or deep drifted snow break fence poles.

New fences are usually put up in mid-summer.



k)

Corrals must often be repaired. This is usually done in winter or mid-summer when time is available.



l)

Whenever equipment breaks down it must be immediately repaired. Mr. Milvain has learned many skills in order to repair mechanical equipment.

In addition, all types of equipment must regularly be maintained (oiling, sharpening, tightening, etc.)

m)

The running of an efficient ranch requires the careful keeping of records. What might Mr. Milvain record? Why?



QUESTIONS:

Give answers to each of the following questions for *each* drawing or photograph in figure 36.

- (1) What hand work does the picture show? What work on horseback? What use of knowledge? Why is this work done?
- (2) For which of the following reasons is the work shown in figure 36 *not* done by machines? Be prepared to explain your answer.
 - a) Probably machines have not yet been invented to do this kind of work.
 - b) Probably this type of work could never be done by machines. It

requires people with eyes and intelligence.

- c) The Milvains *prefer* to do the work in this way.
 - d) Probably machines could do this work, but Mr. Milvain could not afford to use them.
 - e) The place where the work is done is too rough or rocky for machines.
- (3) Use books to find the meaning of all of the words used in this source. Write simple reports to give the meaning of these words.

The next pictures (figure 37) show some of the work on the ranch that is done by machines.

FIGURE 37.

WORK DONE WITH THE HELP OF MOTOR POWERED MACHINES

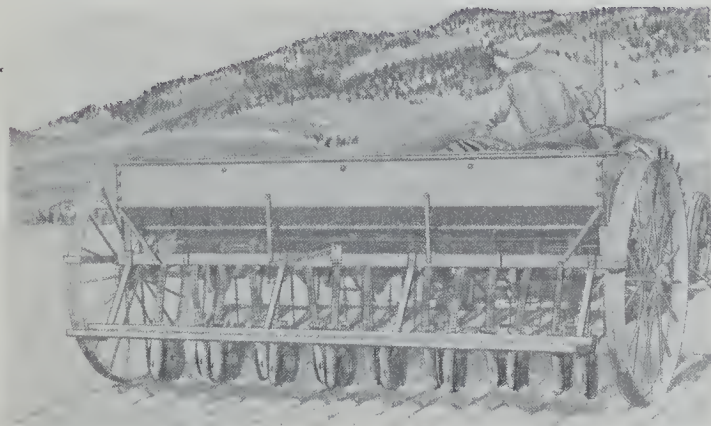


a)

Plowing the land to prepare for the seeding of oats, wheat and tame hay crops (timothy, alfalfa, brome grass).

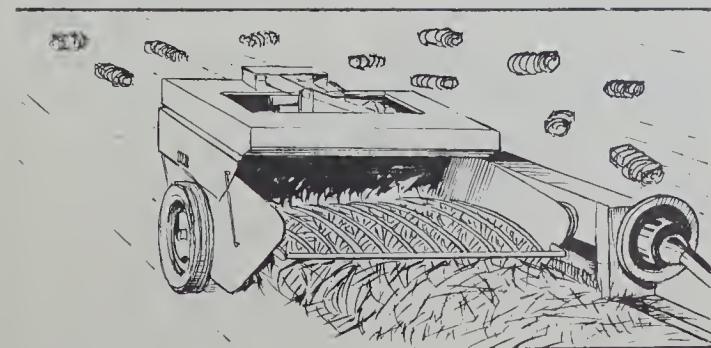
or

Plowing the hay land in the fall to put plant materials back into the soil.



b)

Seeding crops with a small seed drill.



c)

This picture shows a baler. Mr. Milvain uses this machine to prepare *some* of his hay for storage and to transport to his cattle.



d)

Once hay crops are cut and left in swaths or baled, they are picked up. Large rakes pulled behind tractors are used for the swathed hay. The picture shows a loader picking up and transporting baled hay. Can you find Jimmy in the picture?



e)

A machine called a “binder” is used to cut the oats or wheat and tie it into bundles.



f)

This machine is used to lift bales of hay onto piles. It is also used to lift loose hay onto hay stacks. Is Jimmy helping with the work?



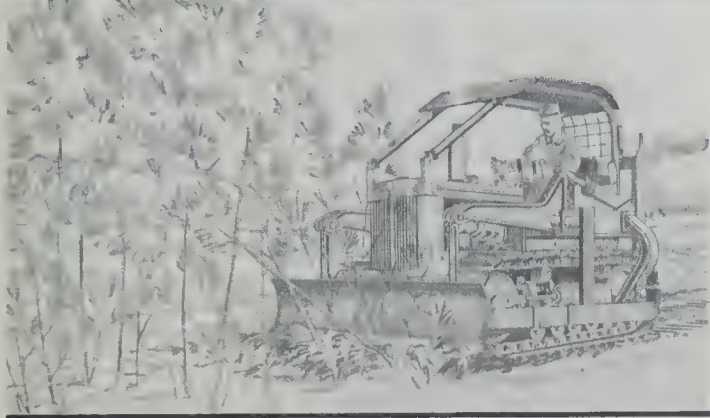
g)

Once a year a threshing crew arrives with a threshing machine. Mr. Milvain pays these men to separate the oat and wheat seeds from the stalks.



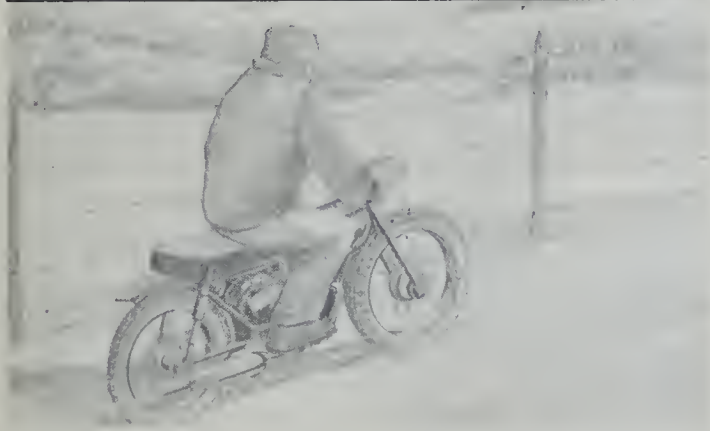
h)

Each fall the corrals are cleaned. A front-end loader attached to a small tractor does much of the work.



i)

The spread of brush has reduced the quality of the Milvain range. Mr. Milvain sometimes clears brush with a bulldozer. Grasses are then seeded on the cleared land.



j)

A small one-man motor scooter especially built to climb rough and steep slopes is used to patrol the fence lines on the ranch and to search for cattle.

QUESTIONS:

(1) Mr. Milvain believes that the machines shown in the pictures save him time and effort. What examples can you find of work done by machines that saves:

a) time?

b) effort?

(2) One important reason why Mr. Milvain runs his farm is to make money. Would you say that the machines shown in these pictures help Mr. Milvain to make more money? Give examples to support your answer.

(3) Does it seem that most of the work



Haying crew eating meal

FIGURE 38.

on the Milvain farm has been mechanized? Find the meaning of mechanized. Look at all of the work shown in figures 36 and 37. Discuss the answer to this question with your class and teacher.

- (4) Can you find machines that seem to be “out of date”? In what way might Mr. Milvain use some “old fashioned” machines?

The Labour Problem

One warm summer evening after sharing a meal with the Milvains and the haying crew, the author asked Mr. Milvain a few questions about the problems involved in running a ranch. Mr. Milvain talked about work on the ranch. Read the following conversation to see if his

answers are the same as the ones you have written about figure 37.

Question: You have told me about how much you enjoy ranch life, and how you wouldn't like to do anything else—but there must be problems . . .

Mr. Milvain's Answer: Sure, plenty of them. I guess the most serious ones are the prices of labour and land.

Question: Let's talk about land later. Why is the price of labour such a problem?

Mr. Milvain's Answer: That's fairly easy to answer. You know how the prices of almost everything have gone up lately. Now . . . I make my money from selling cattle. The prices for cattle have gone up; but the trouble is, the wages I must pay to hired men have gone up more. This means that I make less *profit*—I have less money left over after I have paid for labour, gas for machines, new equipment, . . . and so on.

Question: But can't you use better ways of handling cattle or more machines to reduce the labour? In other words couldn't you be more mechanized and more efficient?

Mr. Milvain's Answer: I have to a certain extent. But the trouble is that there are many jobs that must be done by men who use their hands and heads and there are many things that a man on horseback still does best.

Question: Please explain. I don't understand.

Mr. Milvain's Answer: First, a lot of jobs require hand work: piling or stacking hay,

stooking, helping calves and cows in trouble, branding, innoculating, dehorning, repairing and maintaining equipment, and more I can't think of now.

Second, plenty of work is best done by a man on a skilled horse, like driving cattle, cutting out cattle, catching calves for branding, . . . things like that.

Third, a lot of work is what I call "head work." Recognizing cows or calves that are doing poorly, figuring out which cows to keep and which to sell, knowing where to feed the cattle; I can't do all these things myself.

Question: Couldn't some of those things be done better with mechanized equipment?

Mr. Milvain's Answer: Sure, some could. A helicopter would be dandy for finding lost cattle, but I'm far too small an operator for that. Haying takes lots of hard labour—we have mechanized it to a certain extent, but men still have to pile the bales. Besides, loose hay in stacks still is sometimes the best feed. I could use a "cattle press" for holding cattle for branding, innoculating, etc., but that's a pretty expensive item, which I'm not sure I need. A big grain combine would save labour in harvesting—but the land is rough, the fields are small, and the thing would get plugged or stuck on my damp land. Besides, have you heard how much one costs?

If I wanted to be as efficient, mechanized and automated as possible I would run a stock feeder farm. But that kind of farm isn't suited to this country. We have plenty of open range for grazing.

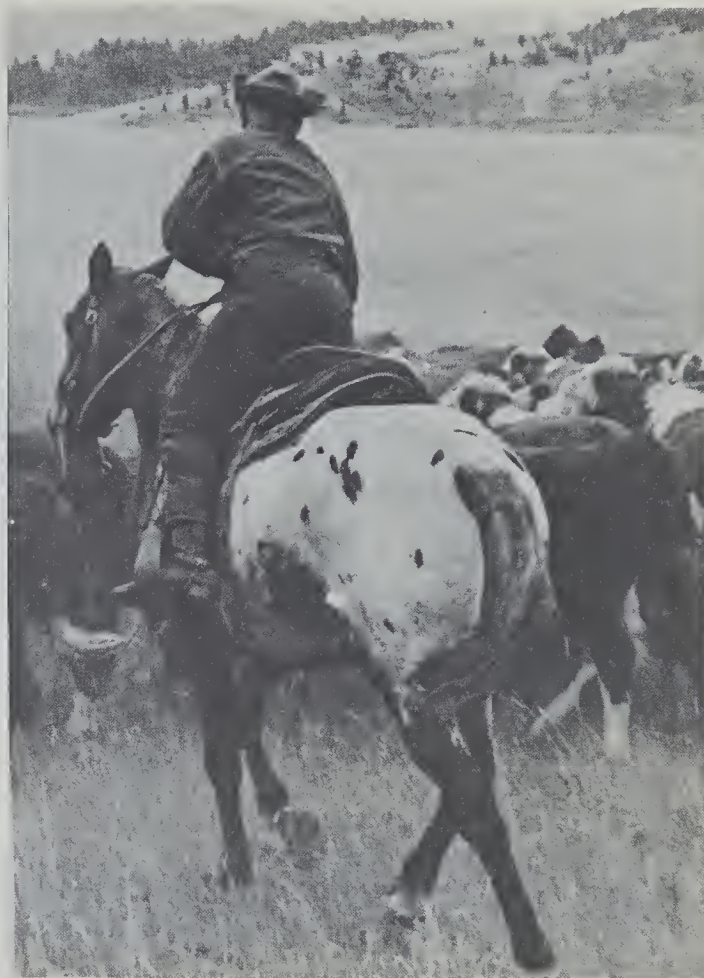


FIGURE 39.

Big stock feeder farms usually feed grain to cattle. I couldn't produce enough grain. Besides, I'm not interested in that business.

QUESTIONS:

- (1) Find out about stock feeder farms.
- (2) Study the drawing of part of a stock feeder farm (figure 40). This picture shows the place where the cattle are kept. It also shows how they are fed. How would this type of cattle

FIGURE 40.



raising differ from that on the Milvain ranch? How might this type of farm be more mechanized? More efficient?

A Year's Work on the Ranch

The work done on the ranch differs from season to season. Figure 41 is a chart that uses pictures and words to tell about a year's work on the Milvain ranch. Since you have already studied this work in the first part of this source it is partly a summary.

QUESTIONS:

A. Practising reading of the chart

- (1) Study the pictures in the column under January. These show work done in January. What work is done?

- (2) Look at the bottom part of the chart. Look at the column under January.
 - a) What kinds of storms are likely to happen?
 - b) On the average how much precipitation falls?
 - c) The small circles show when the sun is lowest and highest in the sky. During what month of the year would the sun's rays be the warmest?
 - d) On the average, what temperatures would January have?

B. How would the ranch look?

- (1) For each of the following months, describe, in two or three sentences, the general appearance of the ranch. (Tell about: the fields; the rangeland; the ranchstead; the roads; the cattle feeding places; etc.)

- a) February c) July
- b) April d) September

C. The ranch activities

- (1) During what four months are the Milvains most busy? What activities are carried on in each of these months?
- (2) For how many months of the year is there no activity in the cultivated fields? What reasons would you list to explain why there is no activity during these months?
- (3) During what months are the Milvains likely to be least busy?
- (4) In what months is the most construction, maintenance and repair work done? Why?

D. The climate and the crops

- (1) For about how long is the average temperature above freezing? About what fraction of the year is this?
- (2) The length of time that plants can grow is about the same as the length of time that the average temperature is above freezing. This is called the "growing season."
 - a) Find the growing season required for wheat in Canada. Is the time on the Milvain ranch long enough?

E. The climate and the cattle

- (1) When extra feed is given to the cattle they are better able to withstand cold. During what months would

cattle feeding probably be the heaviest?

- (2) During what months would the danger to cattle from storms be greatest? What type of cattle would be in greatest danger?
- (3) What is a chinook? Can you find the meaning of this term? How might chinooks affect cattle grazing?
- (4) What things would be likely to happen to a calf born on the ranch? (Follow the life of an animal from birth to when it is sold. Make a list of the activities shown on the chart. Start with calving and then branding, etc.)

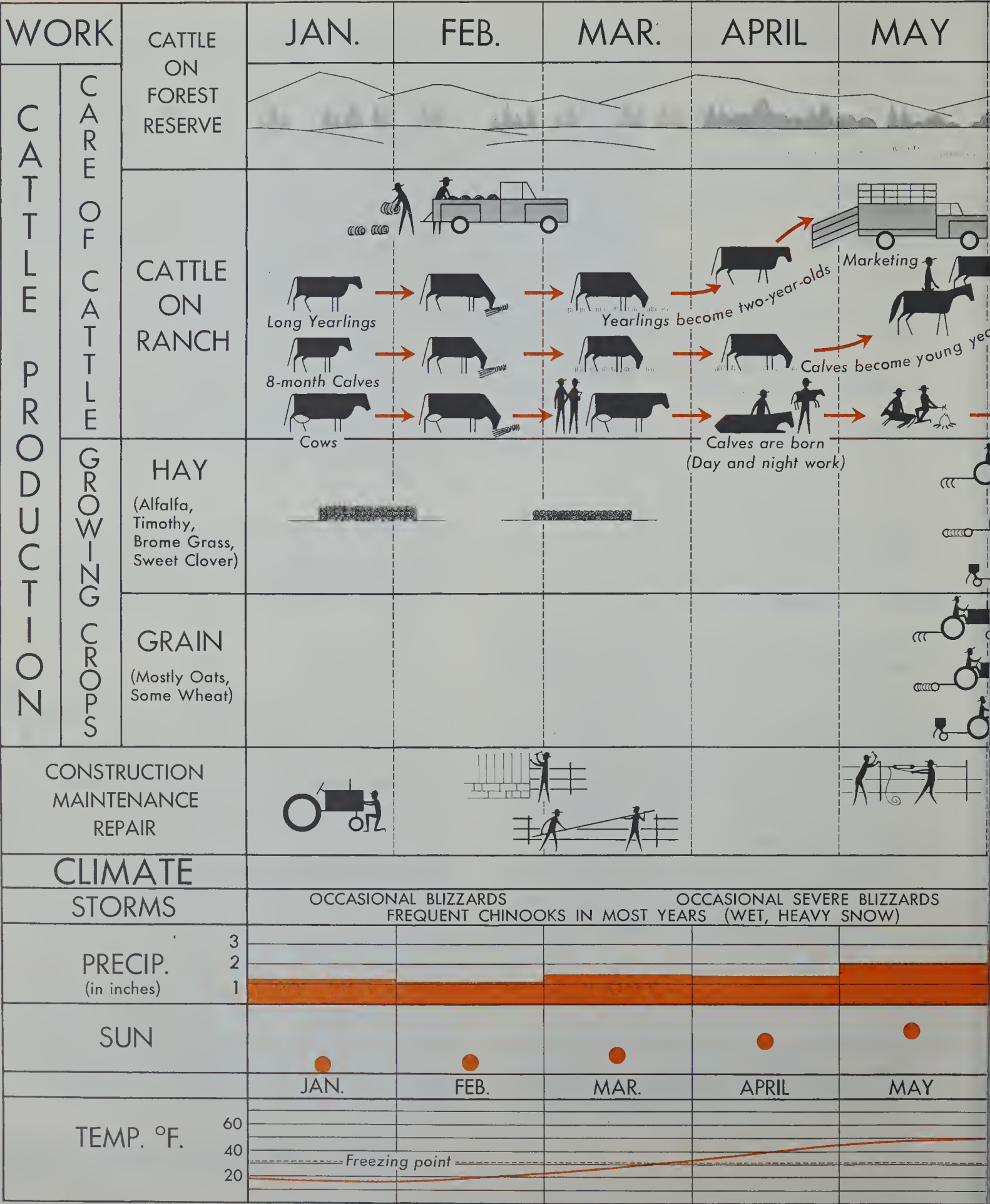
F. Climate and living conditions

- (1) What type of clothing would the Milvains wear to do outdoor work in:
 - a) January?
 - b) July?
- (2) During what months would cattle feeding probably be most unpleasant?
- (3) How does this climate differ from the area in which you live?

Life for the Children

Jena, Lea and Jimmy lead everyday lives that are different in some ways from the lives of most Canadian children. However, in other ways their experiences are much the same. The figures that come next will make it possible for you to compare your life to Jimmy's, or Lea's or Jena's.

FIGURE 41.



JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
THUNDER SHOWERS OCCASIONAL HAIL						
OCCASIONAL BLIZZARDS						
JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.

REVIEW QUESTIONS:

- (1) Look back over the units that you have already studied. What have you found out about the children? List your discoveries under the following two headings. (Also, as you study the rest of this unit list more things about the children as you find them.)
 - a) Ways in which the Milvain children's lives are different from mine.
 - b) Ways in which the Milvain children's lives are much the same as mine.
- (2) What explanations can you give for how their lives differ from yours? (Be careful. Do not explain everything in terms of climate, plant cover, or distance from town. How many things are done simply because you or the Milvain children just "want to do them"? How many are done partly because the Milvains have decided to live on a farm rather than in town? What other explanations can you give?

Taking information from the map

Figure 42 is a map showing the area surrounding the ranch.

QUESTIONS:

- (1) The children attend school in Lundbreck. How far must they travel to school by the shortest all-weather road route?

- (2) A school bus brings them to school. It makes many stops and travels only about one mile for every 5 minutes. How long would it take to travel to school? The bus arrives at the school at 8:45. What time do the children leave home?
- (3) The family sometimes attends a movie in Blairmore. How far must they travel?
- (4) Usually the family car averages 2 miles for every 3 minutes (45 m.p.h.) in the summertime. How long does it take the Milvains to drive to Blairmore?

Comparing the map to the photograph and drawing

Figure 43 depicts the settlement of Lundbreck.

QUESTIONS:

- (1) Point to Lundbreck on the drawing, on the photograph, on the map. Point to the ranch on the drawing and on the map.
- (2) Point to the foothills that lie between Lundbreck and the ranch. Point to the contour lines that show these foothills on the map. Place tracing paper on the map and draw:
 - a) the outlines of the ranch
 - b) the symbol for Lundbreck
 - c) the contour lines that show the foothills that are between these places.

FIGURE 42.

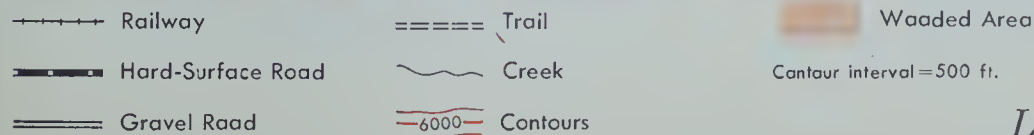
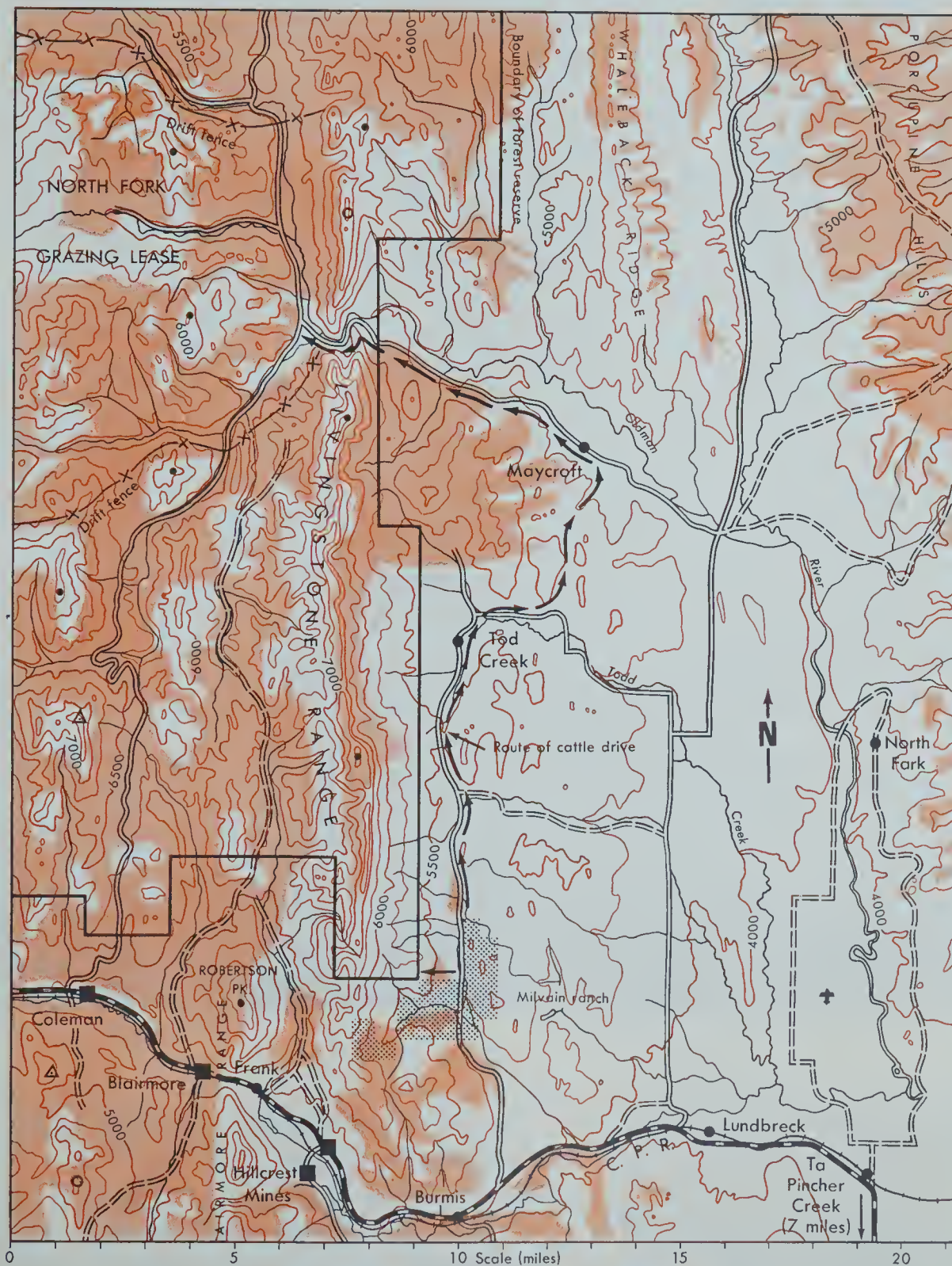




FIGURE 43.

- (3) Most of the country around Lundbreck is like the country shown between the ranch and the town. Point to more of this country on the map. What might most of the people living in the country surrounding Lundbreck do to make a living?
- (4) Draw the shortest all-weather route from the ranch to Lundbreck. This road is not straight or direct. Why do you suppose this is so?



FIGURE 44.

One of Lundbreck's Functions

- (5) Which building in Lundbreck covers the most ground? (In other words, which building is biggest in area?)
- (6) The buildings circled in the drawing are occupied houses.

- a) How many occupied houses are there in Lundbreck?
- b) If there was an average of 1 school child in each occupied house in Lundbreck, how many school children would live in town?

- (7) Is the town likely to have enough children to make use of a school as big as the one shown in the picture?
- (8) Where are *most* of the children that attend school with Lea, Jimmy and Jena likely to come from?
 - a) cattle ranches
 - b) the town of Lundbreck
 - c) wheat farms
 - d) logging camps

Give reasons to support your answer.

Life for Mrs. Milvain

Like many mothers, Mrs. Milvain spends much of her time shopping, cooking meals and cleaning the family home. The map of the area surrounding the ranch (figure 42) and the drawing of Lundbreck (figure 43) show evidence of how she must spend some of her time.

Look at Figure 42 again

QUESTION:

Blairmore is the nearest town with large stores and a hospital. How long would it take for Mrs. Milvain to travel to the hospital over icy roads in the winter time if the car averaged 1 mile for every four minutes (15 m.p.h.)?

Look at Figure 43 again

Lundbreck is one of the towns close to the Milvain ranch that serves as a market for goods and services. *Goods* are “things” that people produce such as cars, wheat

and dresses. Ask your teacher and class to discuss goods produced by people they know. What goods does Mr. Milvain produce? *Services* are actions and not things. Services are useful “work” that people do for other people. Ask your teacher and class to discuss services provided by people they know. What are some services “used” by the Milvains?

A market is a place where goods and services are exchanged. Discuss examples of markets in your community. Make charts showing goods produced in your community; services provided in your community; market places in your community.

QUESTIONS:

- (1) What goods offered by Lundbreck might Mrs. Milvain buy? Would she trade actual goods produced on the ranch for these goods? Would she trade something that “stands for” goods and services? What is this “something” called?
- (2) What goods produced on the ranch might Mr. Milvain sell in Lundbreck?
- (3) What services produced in Lundbreck are regularly used by Lea, Jena and Jimmy?
- (4) What goods and services needed by the Milvains are not offered in Lundbreck? Why doesn’t Lundbreck offer these goods and services?

Figure 45 shows Mrs. Milvain opening an appliance used to freeze and store

food. It is called a deep freeze and can be used to store vegetables, meat, fowl and baked goods for as long as a year. The metal object with the bowl and spouts in the left centre-ground is a cream separator. What function does a cream separator serve?

QUESTIONS:

- (1) What is Mrs. Milvain doing?
- (2) What labour saving facilities can you see in this picture?
- (3) What foods produced on the ranch could be stored in the deep freeze? (Look back to figure 9 and 16).
- (4) What advantages would a deep freeze have for life on the ranch?
- (5) Should stormy weather make travel to a town not possible, in what ways would the Milvains be able to provide for themselves?

Figure 46 shows the place where Mrs. Milvain spends most of her time.

The plan on the next page is of the Milvain house.

QUESTIONS:

- (1) What modern conveniences do the Milvains have? What conveniences that are found in some city homes do they *not* have?
- (2) What things in the Milvain home are never or seldom found in city homes? Why don't city people have these things.



FIGURE 45.

FIGURE 46.



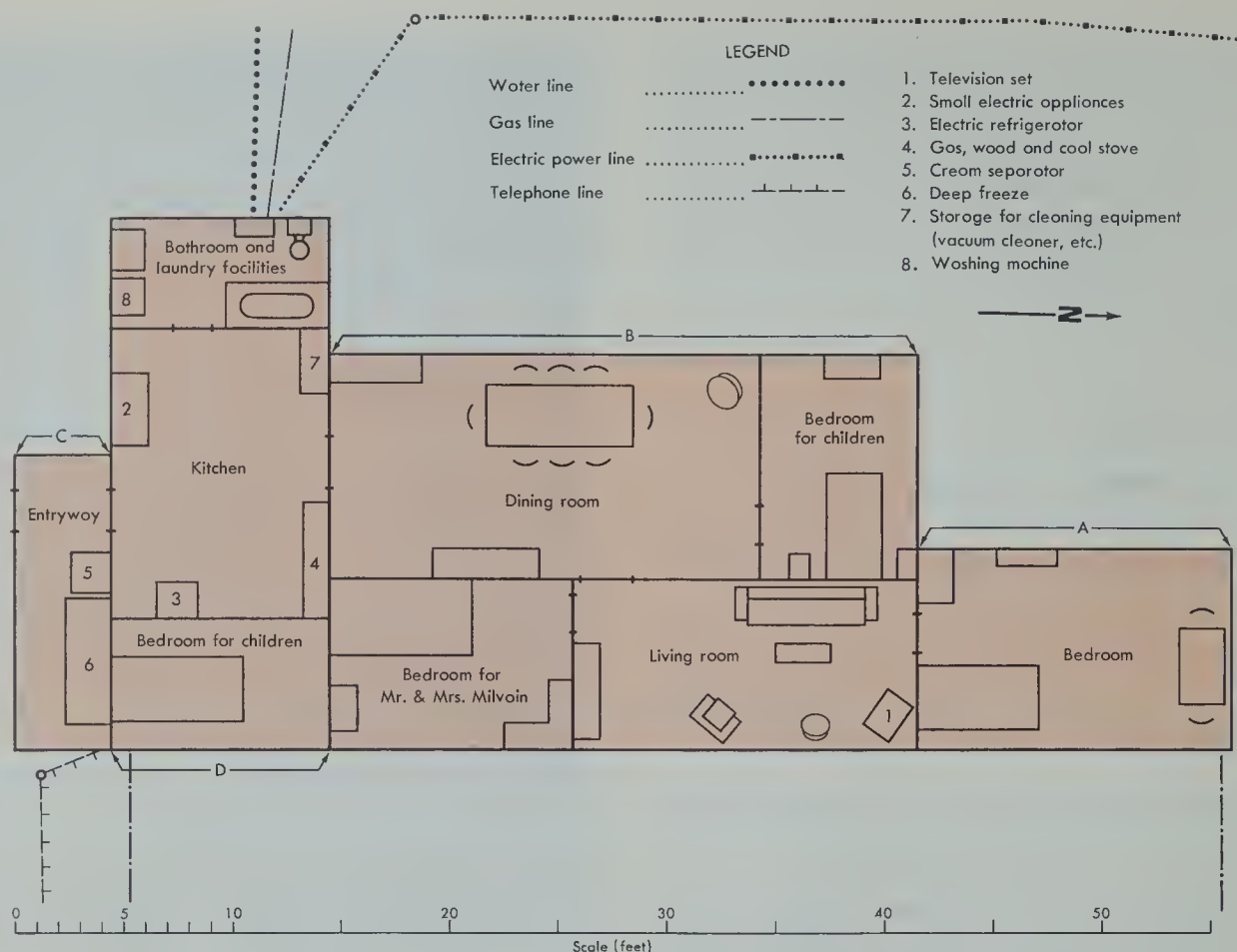


FIGURE 47.

GROWTH OF THE HOUSE

The letters on the diagram above describe the growth of the Milvain house.

- A. The newest part of the house—built about 10-15 years ago of logs taken from a shack built by a man who once owned part of the Milvain land.
- B. The oldest part of the house—built about 50-60 years ago by the man who owned the land on which the Milvains now have their homestead.
- C. & D. The parts of the house built by the Milvains—constructed about 20-30 years ago of lumber bought from the Burmis Lumber Company.

(3) Which is the largest room? What reason would you give to explain

why this room is the largest in the house?

- (4) What local materials have been used to build the house? From what places might these have come?
- (5) Why was the Milvain house built of logs and lumber rather than, for example, bricks?
- (6) How did the Milvain family obtain the centre and northern parts of the house?
- (7) Provided that the Milvains have not sold land what does the way in which the house was “added to” indicate about the history of the Milvain ranch?

Summary

You have been studying about how the Milvains depend upon other people to produce goods and services used on their ranch. Probably you have also discovered that other people depend upon the Milvains to produce beef. When people depend upon each other for things or actions that they need we say that they are "interdependent."

In what ways are you interdependent with other people?

To make sure that you understand what it means to be interdependent, study how you depend upon other people. Try the following exercise.

Write this list of people in your notebook. Underline with red all of the people that you depend upon for goods and services. (Remember: money can be exchanged for goods or services.) Beside the title for each person that you have underlined write one thing or action that you depend upon this person for. Underline with green all of the people that depend upon you to provide goods or

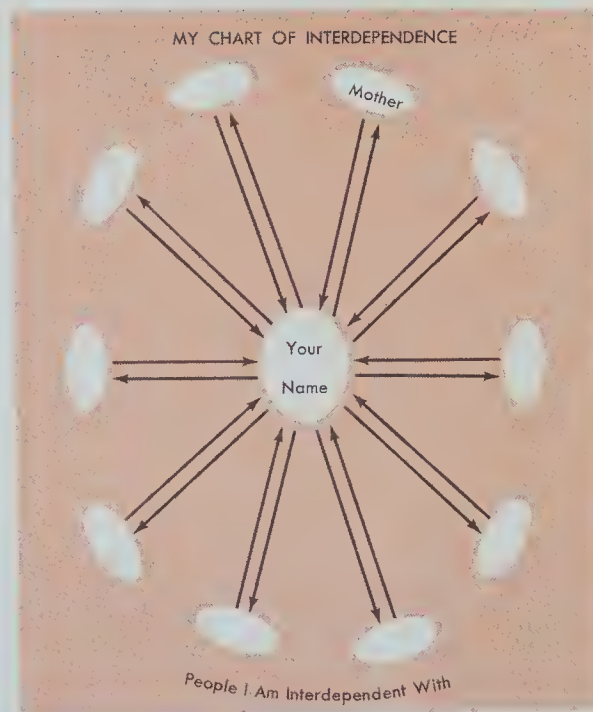
mothers
fathers
grandparents
aunts
uncles
sanitation men
shoe salesmen
grocery men
policemen
firemen
veterinarians

doctors
teachers
librarians
carpenters
riding equipment salesmen
janitors
barbers
nurses
farm machinery salesmen
railroad men

telephone men
garage men
farmers
fishermen
airline employees
meat packing employees
clothing manufacturers
newspaper and television people
plumbers
loggers
shipping employees

services. Write down the name of the goods or service they depend upon you for.

Finally, use a large sheet of paper to organize this information as follows:



Use an arrow from your name to the person who you depend upon. Write one example of the "good" or "service" that you use on the arrow. Also use arrows to show how people depend upon you.

*How are the Milvains interdependent
with other people?*

Work with your class and teacher to develop a large chart much like the previous one that shows how the Milvains are interdependent with other ranchers and people in such towns as Blairmore and Lundbreck.

A good example of interdependence:

As you already know, every summer the Milvains and other ranchers drive cattle from their ranches to the forest reserve. In the fall the cattle are driven back to the ranches. The story of how

this is done is a good example of how people can become more interdependent as they work together to do something. Read the story and answer the questions that follow to find examples of interdependence.

Every year, as June approaches, the Milvains make ready for two cattle drives. Other ranchers come to help with the branding and Mr. Milvain helps other ranchers. The veterinarian from Pincher Creek is often called in to check the health of the cattle.

One cattle drive is very short—to the forest reserve on the eastern slopes of the

FIGURE 48. The cattle drive.



Livingstone Range. A second drive is long—from the ranch through the “Gap” in the Livingstone Range to the North Fork Grazing Lease.

QUESTIONS:

- (1) Turn back to figure 42 (map) and find the routes of both cattle drives. How far would the cattle be driven in the shortest drive? On the longest drive?
- (2) Point to the location on the map where the cattle are driven through the mountains into the North Fork Grazing Lease. Look carefully at the contour lines that show the mountains where the road passes through them. Pick the best description of this place:
 - a) the road passes through a wide valley between low mountains.
 - b) the road climbs steeply over the crest (top) of a high mountain range.
 - c) the road passes through a narrow gorge between high mountains.

Once the cattle have been made ready the two cattle drives begin. The long drive is the most interesting. Each rancher starts by driving his own cattle and, by the time the approach to the mountains is reached, many ranchers have “teamed up” to drive large “combined” herds.

Once the cattle have been taken into the reserve they are driven to assigned grazing places. A “rider” takes responsibility for the cattle during the summer.



FIGURE 49. Cattle being driven through the Gap.

His job requires the frequent inspection of the herds and the driving of small groups of cattle from one grazing place to another.

The ranchers that keep their cattle in the reserve have become organized to (a) pay the rider, (b) to set up rules for the protection of the land from overgrazing, (c) to organize the round up or the cattle drive out of the Lease, and the “cutting out” operation.

The round up may require several days. Ranchers and hired men work with the “rider” to search out all of the cattle on the huge grazing lease.

In most years everything is planned so that nearly all of the cattle are ready to be driven out of the Lease by October 15. (The Government of Canada rents the grazing of the land for a limited number of days.)

FIGURE 50. Meal in Maycroft Hall



On October 15 the men start to move the cattle before the sun comes up. By 7:30 a.m. the herd is usually passing through the gap—the most spectacular part of the drive. (See figure 49.)

The wives of the ranchers have also organized to make the work possible. In most years, by noon the cattle drive has reached the Maycroft Hall (find Maycroft on the map) and the men are ready for a big meal. The wives have spent weeks preparing for the “big feed.” Committees have been organized to buy beef from ranches, to obtain additional foods from stores in Blairmore, Lundbreck or Pincher Creek, and to prepare the meal.

Over the years the word has been “spread around” that interested people are welcome at the meal. Thus the meal is one of the big social occasions of the year. Ranchers and their families and guests meet for the first time or renew old friendships.

After the meal the cattle are “cut out” of the big herd and driven back to the ranches.

One of the ranchers said to the author of this book at the last Maycroft meal, “With modern cars, good roads, television and frequent trips to town, we don’t see each other as often as we did in the old days. This meal is one of the few times that we get together. I think that the cattle drive is very important to our community. It helps to make us feel that we have something special here. At least once a year we get together to use the skills we all take pride in. Do you see what I mean?”



FIGURE 51. This picture shows horses grazing on range near the Maycroft Hall. It is an example of good range; that is, the plants that cover the land are not overgrazed but are tall and healthy. The flat land in the middle of the picture has not been cultivated because the native grass is very nutritious for cattle and because the growing season is too short for the growing of crops like oats or wheat.

QUESTION:

What words would you use to explain what the rancher meant when he said: “the cattle drive helps to make us feel that we have something special. . . .”

Summary

Discuss and list with your teacher and class the questions that you would like answered and the hypotheses that you

would like to check from your study of Unit VI. Let’s see how many of these questions and hypotheses can be “checked out” as you read the information on the next pages.

A ranch and not a cattle farm

The Milvains operate a ranch. “Ranches are places where most of the land is native range. Native range is land that has not been cultivated; the plant cover is still

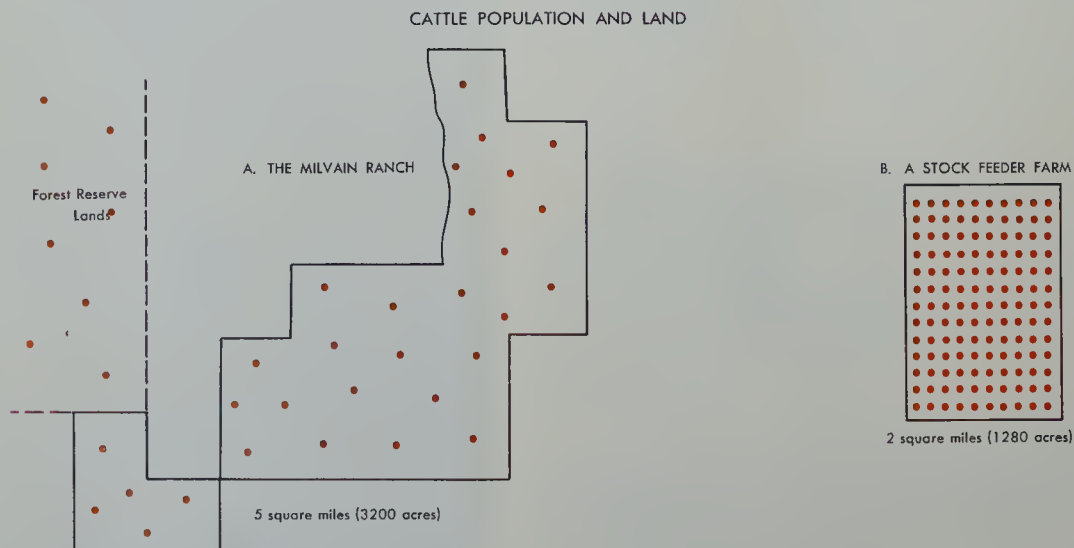
largely plants that grew on the land in the days when Indians hunted buffalo.”

QUESTIONS: (Figure 51.)

- (1) What does the term “growing season” mean?
- (2) For what reasons would the land in the background be left as native range? (Why is this land not cultivated?)
- (3) An expert on grasses would recognize that some of the grass in the picture is not native grass. Make an hypothesis to explain how “tame” grasses have spread to cover part of the range.

Because most of the Milvain land is covered by native plants that cows graze on, it does not produce as much food as land that is cultivated. This is shown in the diagrams that follow.

FIGURE 52.



Each small dot stands for 10 cattle. Diagram A shows the Milvain land and the cattle raised on it and the forest reserve. Diagram B shows the cattle raised on a “stock feeder farm” like the one shown on page 42 of this study.

QUESTIONS:

- (1) The more food produced on each acre of land the more “intensive” the land use. Which is more intensive, the stock feeder farm or the Milvain ranch?
- (2) The opposite of “intensive” land use is “extensive” land use. Which is more “extensive,” the farm or the ranch?
- (3) Why has Mr. Milvain not made more intensive use of his land?
- (4) Men who know a great deal about farming and world food problems

say that soon most farms and ranches will become more intensive. Why do they say this? Discuss the question with your teacher and class.

- (5) Use the following words in sentences to write the meaning of "ranch": range, extensive, native plants, cultivated land.

Work done all year long

Probably you have discovered that much of the work on the ranch changes from season to season. However, some work must be done all year long. Marketing of goods and services is an example of this kind of work. The Milvains travel regularly to Blairmore, Bellevue, Lundbreck and Pincher Creek to buy supplies.

The next map shows the towns they travel to most often and the places where they obtain goods and services. (Note: the map does not show trips to school.)

The coloured lines show how often the Milvains travel to each town. The wider the line the more often the Milvains travel the route shown by the line.

QUESTIONS:

- (1) In which towns do the Milvains do marketing?
- (2) Why do you suppose the Milvains shop in: a) Blairmore b) Bellevue c) Lundbreck d) Pincher Creek e) Lethbridge?
- (3) What would some advantages of shopping in one town be?

TRIPS TO TOWN—MARKETING PLACES SELECTED BY THE MILVAINS

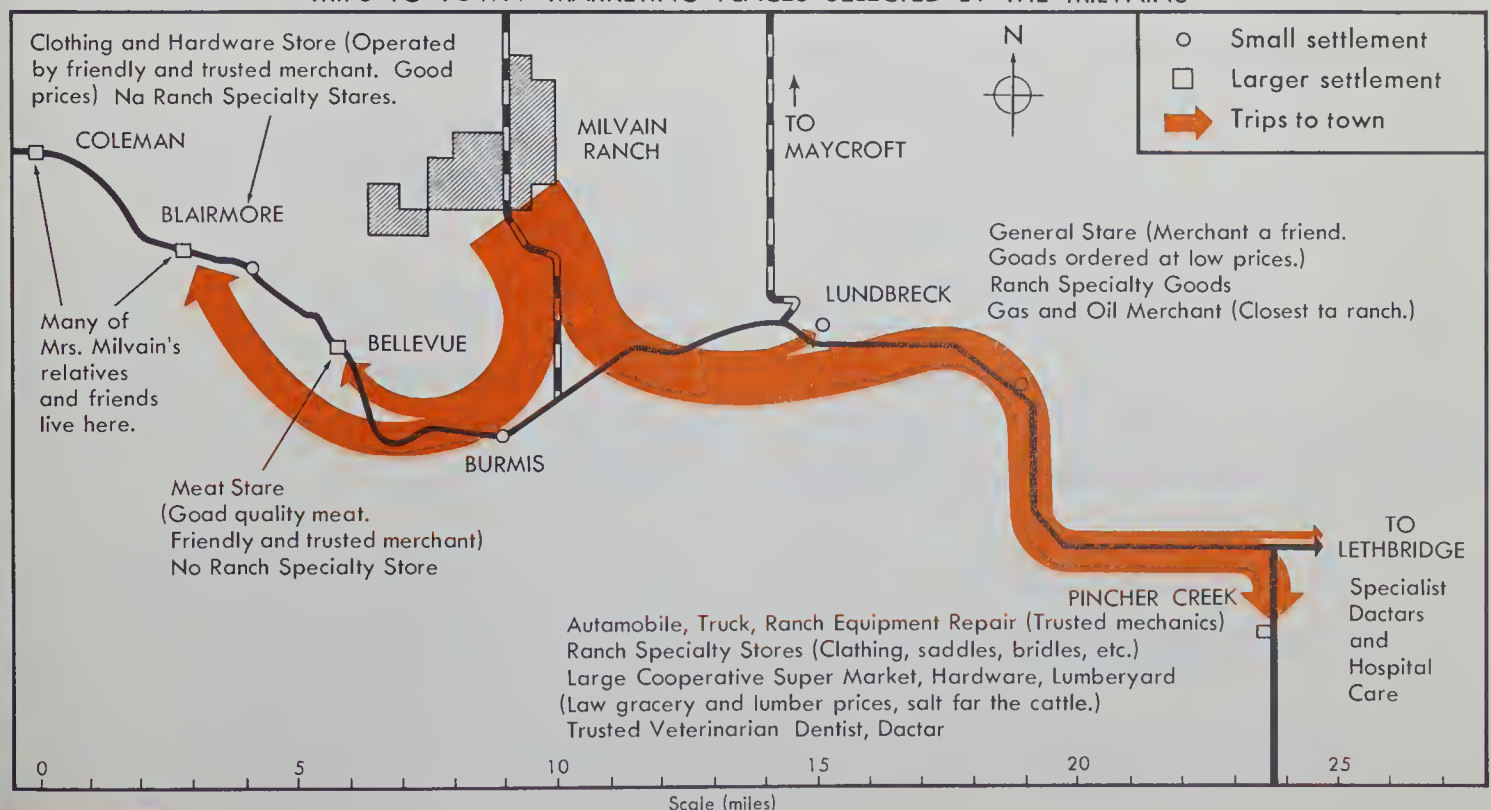


FIGURE 53.

- (4) Why do you suppose that the Milvains shop in Blairmore and Bellevue as well as in Pincher Creek?
- (5) Why don't the Milvains do all of this shopping in the nearest large town?
- (6) Where do the Milvains obtain most of their services?
- (7) Make a list of the places where your parents do marketing. Ask your parents why they shop at these places. Make a chart like the one below to show this.
- (8) Work with your class and teacher to make a list of all of the types of reasons why parents do marketing at one place and not another. Are the reasons given by your parents the same as those of the Milvains?

The Milvains spend much time and money on marketing for supplies. They try to obtain the best goods and services for the cheapest prices and they try to visit with friends and relatives on marketing trips. Thus they consider many things when they decide where to market. The farther they travel the more they must pay for gas. Mr. Milvain has been dealing with some merchants for many

years and trusts them to sell him dependable goods. Some merchants compete with other merchants by reducing prices. Some towns offer goods and services not available elsewhere near the ranch. Most of Mrs. Milvain's relatives live in one direction from the ranch. Many of the longtime friends of Mr. Milvain live in the other direction. The map shows the decisions they have made. The chart that follows, figure 54, sums up the story of marketing on the Milvain ranch.

QUESTIONS:

- (1) Have you noticed that the chart also shows how the Milvains are interdependent with people in many towns? Could you call these towns ranch centres? Explain your answer.
- (2) Why are the brown arrows labelled INPUT? Why is the grey arrow labelled OUTPUT?

Work that Changes with the Seasons and the Habits of the Cattle

Probably figure 41 helped you to understand how work varies from season to season on the ranch. The charts and words that follow sum up the story told by that figure.

WHERE MY PARENTS DO MARKETING	WHY MY PARENTS DO MARKETING AT THESE PLACES

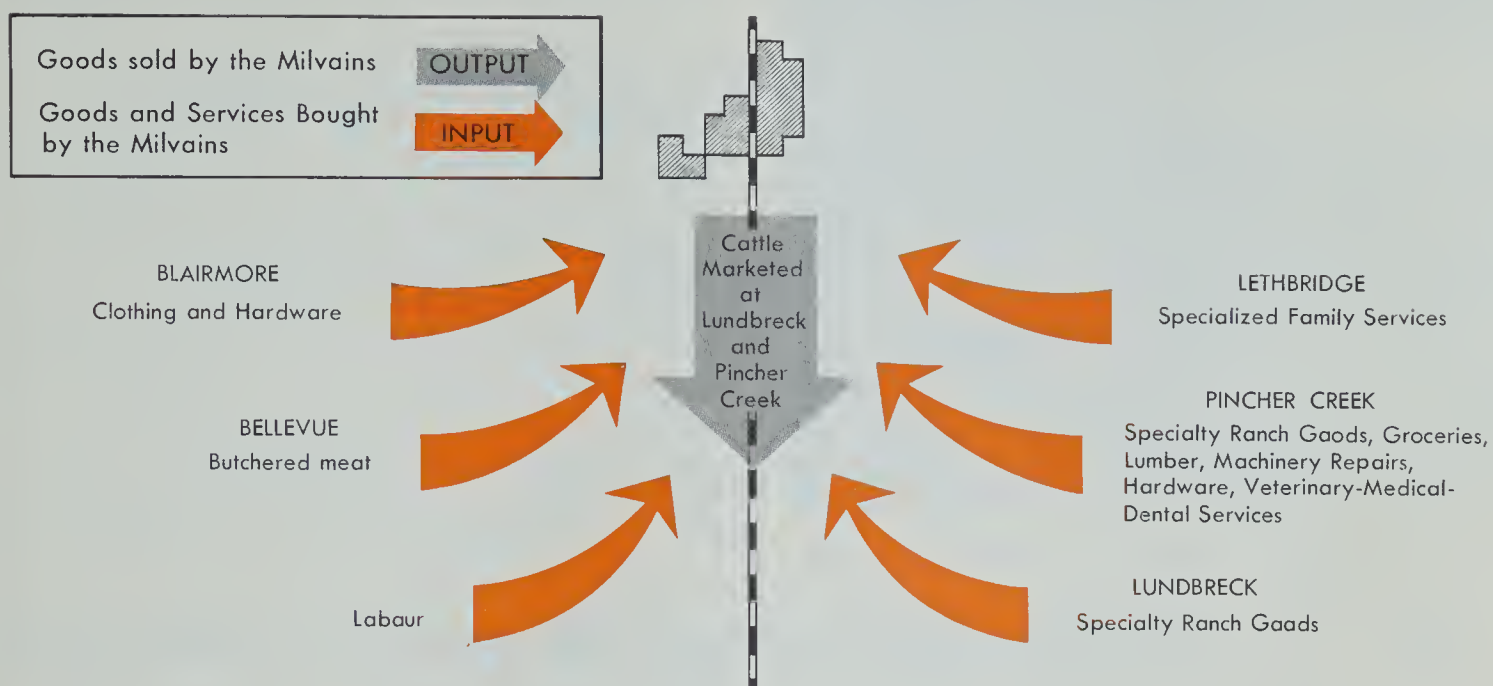


FIGURE 54.

The Spring

MAJOR RANCH ACTIVITIES

APRIL	Calving Time: Cows are looked at several times each day to see that the calves are healthy and well. Often veterinary help is needed (done by the veterinarian, the rancher or hired man). Cattle are fed early in the day.
MAY	Repairing fence breaks caused by big game and shifting snowbanks is the big job at this time. Spring Seeding, Branding, Cattle Driving, Spring Sale of Cattle. Mr. Milvain plows, seeds, cultivates his land in order to grow grain and tame hay.

A TYPICAL DAY OF WORK FOR THE MILVAINS

4:45	Rise and tea Check cows and calves (look for new born calves in particular) Feeding of cattle Milk Cows
8:15	Breakfast—School bus takes children to Lundbreck school
8:45	Check cows and calves Feeding of cattle
12:00	Dinner—the big meal of the day
12:45—2:00	Siesta (a period of rest)
2:00	Maintenance work—mostly fence repairs and the building of new fences Branding of calves (late in May)
4:00	Tea—School bus arrives from Lundbreck Check cows and calves Feeding stock Milk cows
7:00	Supper Check cows and calves Rest

Why is the Spring such a busy time on the ranch?

Mr. Milvain has explained that the spring is the critical time on the ranch.

“In the spring the chips are down. This is when the calves are born. If we lose calves we won’t have yearlings in a year’s time or 2 year olds two years later. A ranch without calves is like a farm without seeded fields.”

As the charts show: first, the cows are watched very carefully; then, when the time for the birth of calves comes, Mr. Milvain and Freddy Lee can work as long as 18-20 hours a day. When conditions are bad they may work for several days without sleep, and still lose some of the calves.

When are conditions bad? This happens when the cows are not as strong and

healthy as usual or when spring storms strike the foothills.

Calves are weak after bad Winters

Cows in the foothills may be weakened after especially cold and snowy winters. This does not happen often on the Milvain ranch. The hay and oat fields are usually very productive and the cattle are given enough feed even during the worst storms. The dangerous time happens when the chinook winds fail to come as often as usual. To understand what it means for a chinook to fail you must first read about what chinook winds are.

THE CHINOOK

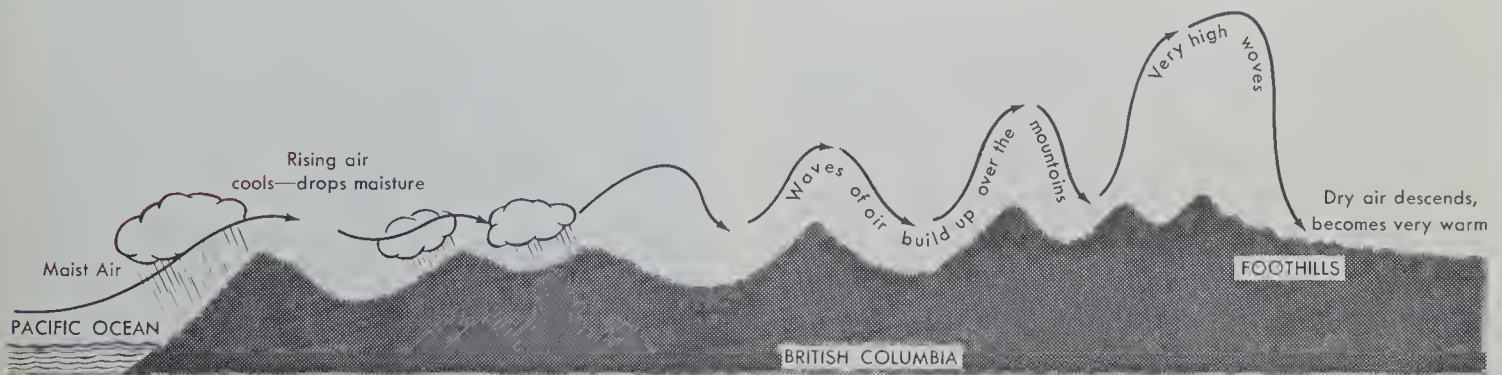
The *chinook* is an Alberta wind. It occurs most often in southwestern Alberta, although it has been known to come as far north as the town of Peace River. An arch of clouds in the western sky usually tells people that the chinook is coming. A mass of air that has come from the Pacific Ocean becomes dry as it passes high over the mountains and very warm



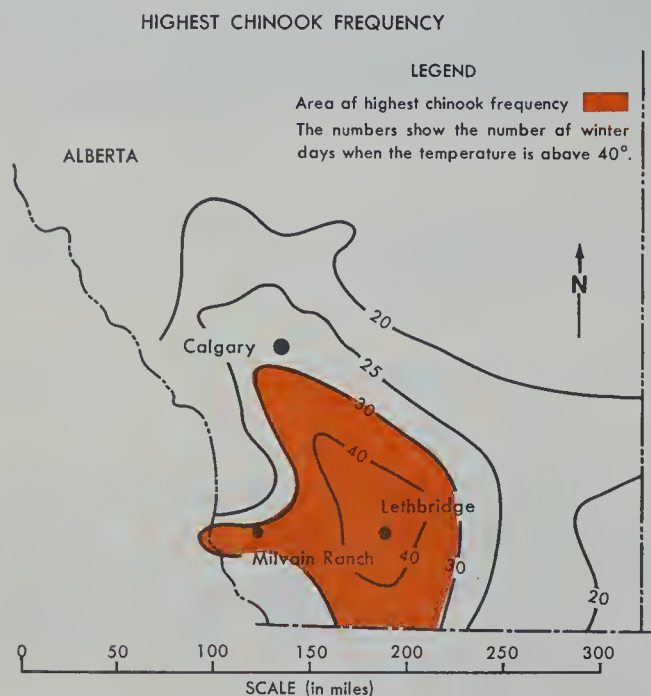
FIGURE 55. Chinook arch over Calgary. Find Calgary in figure 5.

as it descends upon the plains. The oversimplified diagram below shows one explanation of how this happens. (Scientists are not yet completely sure how the chinook happens.)

FIGURE 56.



The Milvain ranch is in the area in Alberta where chinooks happen most frequently. This is shown by the shading on the map that follows. Which city is in the part of this area which has chinooks even more frequently than the ranch?



The buildings circled in the drawing are occupied houses.

Mr. Milvain tells of how the temperature can increase 40 degrees in a few minutes when the chinook “strikes.” Snow can be melted very speedily. This is very important because the ground is laid bare and the cattle are able to graze on pasture. In most years this happens often enough for cattle to take some food from the range all year long.

The trouble is, every 10-15 years, the chinooks do not come very often. The snow on the pasture deepens. More hay than usual must be brought to the cattle. If the previous summer has not been “a good haying season” the supplies may be short by spring. This is the time when cows are less healthy and the calves they gave birth to are weak. Calves in this condition must be cared for very carefully.

Mr. Milvain has explained that he is very lucky. In most years he is able to produce plenty of hay. Bad winters are uncommon. Just the same, severe winters occur and Freddy Lee says that, “When they come, the spring is pretty rough.”

Dangerous Springs

Sometimes snow falls in the months of April and May. When it comes in the form of severe blizzards the results can be disastrous for many ranches. The story below was taken from a government report* and is an example of a particularly severe spring blizzard.

Normal spring weather and associated activities were interrupted by a severe storm between the 17th and 20th of April, 1967, which deposited from 20 to 30 inches of snow over a large part of Southern Alberta. This storm immobilized the area and caused some losses to cattle but not much above normal. The area was just recovering, when a second storm on the 27th to 30th of April added

*Alberta Emergency Measures Organization, *Operation Snowbound*, June, 1967

another 20 to 40 inches of snowfall. The second storm was accompanied by high winds, which piled up drifts as high as 20 feet and filled in the gullies and low ground and generally left two feet of wet snow on the level. Approximately 14,000 square miles of the southern part of the province were seriously affected.

Road and rail movement was impossible; in some areas telephone and power lines were down and homes were without heat or communications. On the open

range, livestock suffered severely. The herds had broken up into small groups which drifted with the wind to the limit of their endurance or until stopped by fences—many were trapped in gullies or deep snow and some were stranded on the ridges—all without feed. Calves and lambs perished quickly under these conditions and adult livestock were in too weakened a condition to survive long without help.

Typical snow conditions in urban centres of Southern Alberta in the wake of the second storm.



The calving season was on when the storm struck. Calf losses were not fully known until autumn.



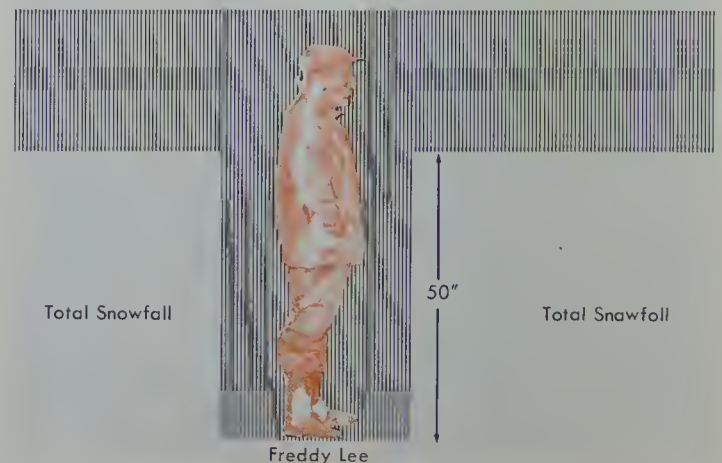
Volunteers unloading and distributing feed to starving cattle which, in this case, had found a bare island in the sea of snow.

Aftermath as the snow melted. Fields were flooded, roads washed out. Conditions were not this bad on the Milvain Ranch.



About 50 inches of snow fell on the Milvain ranch during the two storms.

Fortunately, some of it melted during the time between the two storms. Also Mr. Milvain owns a caterpillar tractor and bulldozer blade which he was able to use to make roads over the range to where the cattle had drifted or to clear bedding places for the cattle (open places in the snow where hay can be spread out and where cattle can seek shelter). Further, the previous summer had been good and plenty of hay was available. Thus he lost few cattle in comparison to many



ranchers and did not need help from the government.

The Alberta government made 13 helicopters available to ranches in southwestern Alberta. Each helicopter brought bales of hay to stranded livestock.

However, Mr. Milvain adds, "Just the same, the spring was a miserable time. It was very cold and hard work. Afterwards some of my range was left damaged by the marks of the caterpillar tracks . . . and, a strong chinook caused the snow to

melt, leaving washouts in a few places."

QUESTIONS:

- (1) Make a chart like the one below to compare a day in the life of your family in the spring to that of the Milvains.
- (2) Does your life change very much from season to season? If life on the Milvain ranch changes more than does yours explain the differences.

WORK IN THE SPRING

WHAT IS A DAY LIKE ON THE MILVAIN RANCH?	WHAT IS A DAY LIKE FOR MY FAMILY?	WHAT ARE SOME OF THE REASONS FOR THE DIFFERENCES?

The Summer and Fall

MAJOR RANCH ACTIVITIES

JUNE	Calves are vaccinated and branded and herds are sorted for driving to the grazing leases. The drive to the North Fork lease takes two days around the 1st of June.
JULY	Haying Time: The cutting, raking, baling, stacking and piling of hay takes much of the time. There is usually no rush to complete this job. This is often the time of year in which there is the least work to do. Most of the cattle are away from the ranch so any spare time not used in haying is used for general maintenance and upkeep.

AUG.	Sometimes haying spreads into August—probably the least busy month of the year.
SEPT.	Round-Up Time: The round-up of cattle on the grazing leases and the drive back to the ranch must be finished by October 15th. Branding, stacking hay, harvesting of wheat and oats, fall plowing, general cleanup of fields and yards and stock pens—all the preparations for winter—are completed.
OCT.	The Annual Fall Stock Sale at Lundbreck attracts many buyers. Some cattle (mainly old cows and some of the two year olds) are trailed from the ranch to this sale. The sale, along with the cattle drive and other events associated
NOV.	with it, is attended by all the ranchers in the area and is one of the most important events of the year. The sale is held shortly after the cattle are driven back from the North Fork grazing lease.

A TYPICAL DAY OF WORK FOR THE MILVAINS

5:45	Rise and tea General chores Milk cows
8:15	Breakfast—Bus arrives to take children to Lundbreck school. Plowing, tilling and seeding in early June Mowing, raking, some baling and stacking bales of hay—the main crop Cutting (binder), stooking, and threshing of grain
12:00	Dinner
12:45—2:00	Siesta Sowing or haying or harvesting
4:00	Tea—School bus arrives from Lundbreck Milk cows
7:00	Supper Rest

The Winter

MAJOR RANCH ACTIVITIES

DEC.	Feeding Time—season of heavy feeding of all stock The cattle are divided into groups: young spring calves are weaned and kept in one group, yearlings in one group, the two year olds and others chosen for Spring Stock Sale are in another group, and bulls are in another group. Each group of cattle is fed according to a plan developed through the years.
JAN.	
FEB.	
MAR.	

A TYPICAL DAY OF WORK FOR THE MILVAINS

6:30	Rise and tea General chores
7:30—8:15	Breakfast—School bus takes children to Lundbreck school Feeding of cattle—Mr. Milvain and Freddy Lee haul feed to the cattle.
12:00	Dinner
12:45—2:00	Siesta Odd jobs such as building, repairing buildings and equipment, and maintenance.
4:00	Tea—School bus arrives from Lundbreck Feeding weaned calves
7:00	Supper Rest

QUESTIONS:

- (1) Look back over all of the work done on the Milvain ranch. Make a list of the jobs you would have to learn to do to become a ranch worker.
- (2) Which of the following words or phrases *best* describes the work done on a ranch? (Pick as many as you think are correct)
 - a) requires many skills
 - b) long and tiring
 - c) requires few skills
 - d) restful
 - e) simple
 - f) easy
 - g) complex

UNIT VII: MAKING COMPARISONS

Farming in Canada

Only a small part of Canada is suited to farming or ranching. The map called "Canada's Farming Regions" shows this. (Perhaps you have noticed that the map does not show ranching regions as separate areas. This has been done to make the map as simple as possible.)

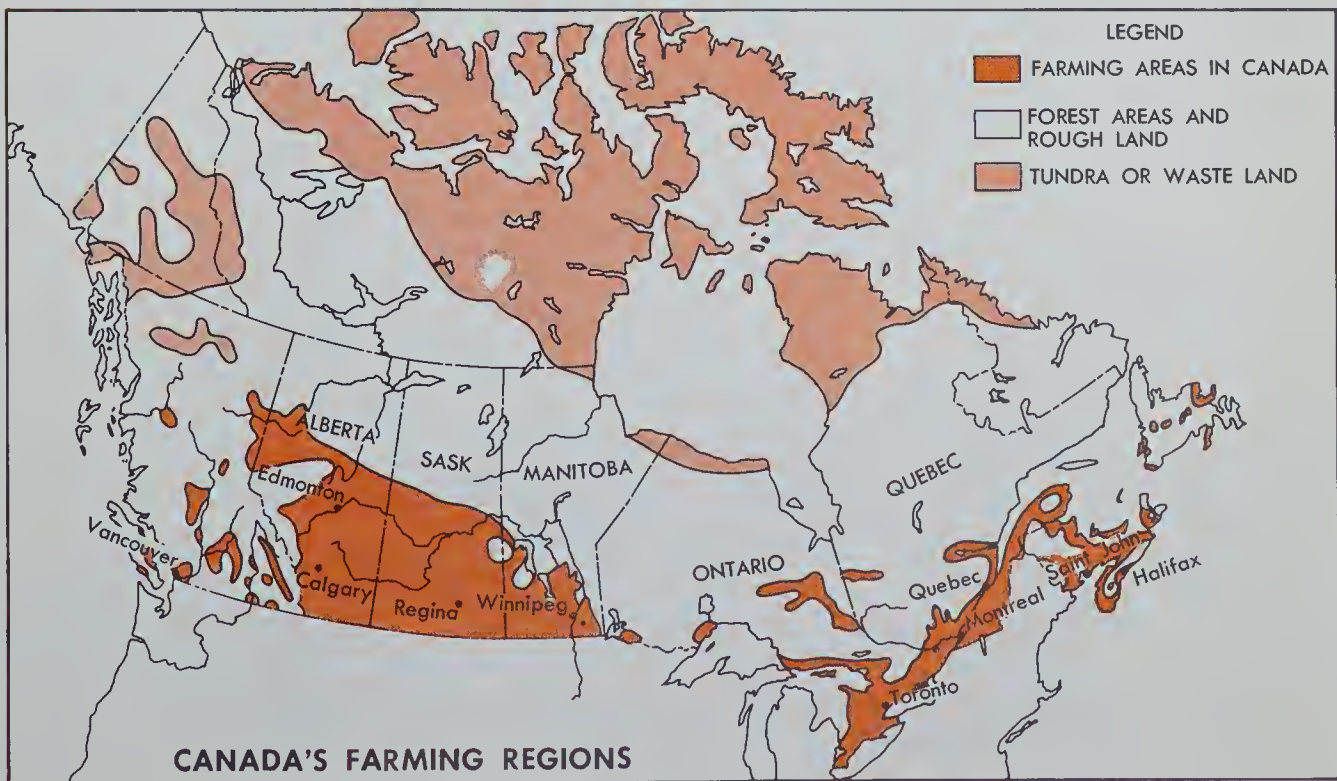
QUESTIONS:

- (1) Place tracing paper on the map. Trace the outline of the Prairie Provinces. Trace and colour the Prairie Provinces' farming region.

Mark the approximate location of the Milvain ranch with a small x.

- (2) About what fraction of the Prairie Provinces is suited to farming or ranching?
 - a) $\frac{9}{10}$?
 - b) $\frac{1}{10}$?
 - c) $\frac{1}{3}$?
 - d) $\frac{1}{2}$?
- (3) What are some reasons why the far-northern and some of the western areas in the Prairie Provinces are not suitable for farming or ranching? Suggest answers to this question; then read books and write a short

FIGURE 57.



report to show which of your answers are correct. (Probably you have noted that the map legend gives partial answers to the question. However, these answers are too simple by themselves. Find additional answers.)

Farming and Ranching in the Prairie Provinces

The following map shows the types of farming and ranching that are found in Alberta, Saskatchewan and Manitoba.

QUESTIONS:

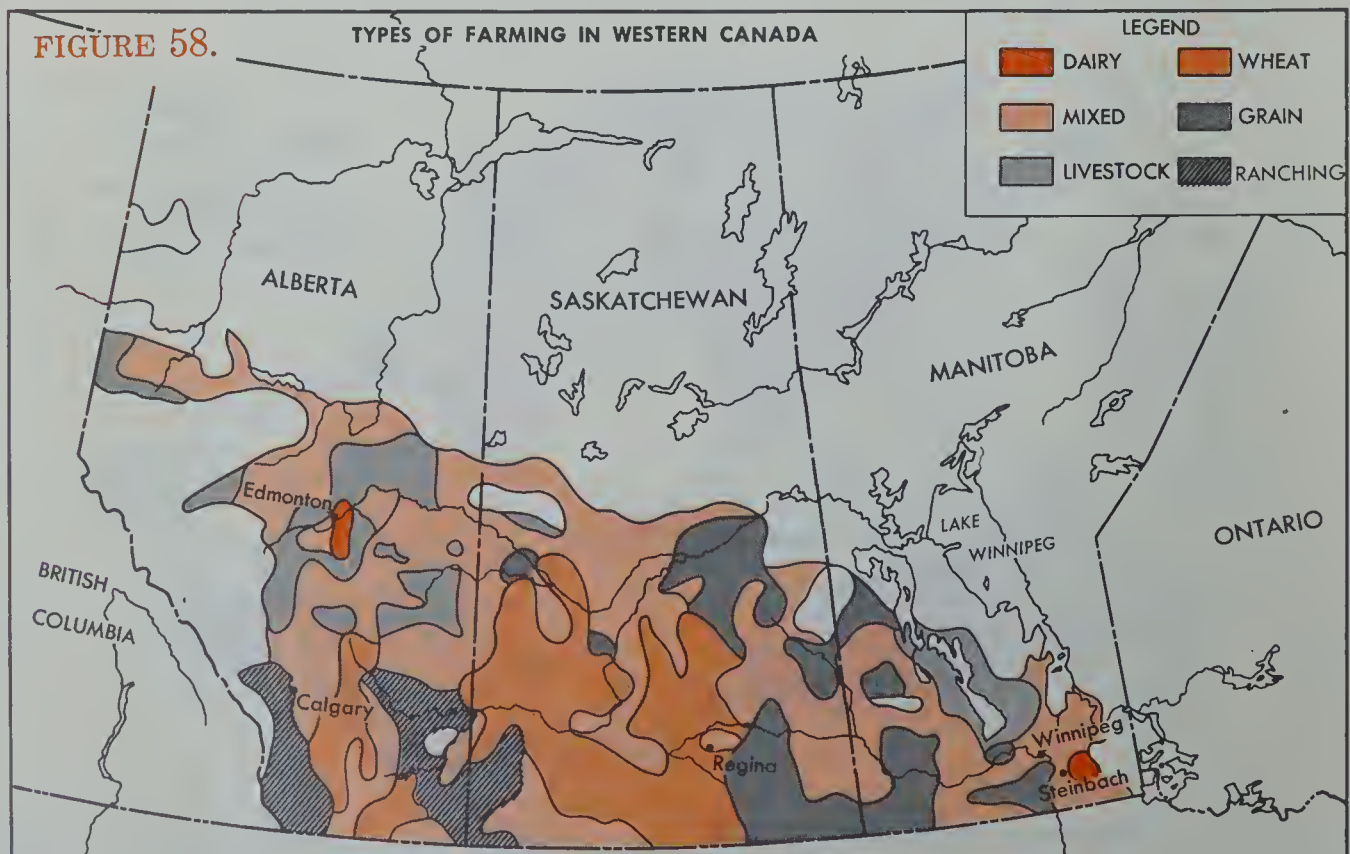
- (1) Which Prairie Provinces have ranching areas?
- (2) Suggest reasons to explain why these

regions are used for ranching instead of, for example, mixed farming. Discuss your ideas with the class and teacher. Read books, look at maps, and write a short report to show which of the reasons suggested by you or your classmates are correct.

- (3) Does ranching occur elsewhere in Canada? Where? Why ranching instead of farming? Read to find the answers to these questions.

Is the Milvain Ranch Representative?

Is the Milvain ranch like most ranches in the Prairie Provinces? In other words, are the features and activities on the



ranch representative of ranches in the Prairie Provinces?

Two ranching regions can be named in Alberta and Saskatchewan. The first is on the plains and Cyprus Hills of southeastern Alberta and southwestern Saskatchewan. (See map of farming and ranching on the Prairie Provinces.) Most of this is ranching country chiefly because the climate is too dry for cultivated crops. Only the Cyprus Hills part of this region has more rainfall. (In many ways the Cyprus Hills are like the foothills.) The second is the southern Alberta foothills

ranching region. The Milvains live in this region. In some ways their ranch is representative of ranches in the foothills.

The ranchstead

Figure 59 shows a different ranchstead, which is representative of most in the foothills region. This ranchstead was picked because it has the features and location of most of fifty foothill ranchsteads picked as a "sample" of those in the region. Study it carefully. Put tracing paper over the photograph and label the features that you recognize.

FIGURE 59.



Write a description of its location. What features are “grouped about” the buildings?

Look at page 75. The drawing, figure 60, shows the same ranchstead. Did you label the features correctly? Com-

plete a chart like the one that follows to compare the Milvain ranchstead to the representative ranchstead. How many features on the Milvain ranch are representative of ranchsteads in the region?

CHECK CORRECT ANSWERS

REPRESENTATIVE RANCHSTEAD	MILVAIN RANCHSTEAD	REPRESENTATIVE	NOT REPRESENTATIVE
FEATURES:	FEATURES:		
Setting: Located on the flattest part of a valley floor between high ridges. The ridges are covered by evergreen trees toward the top. A meandering stream with bushes growing along its banks winds through the settlement. FEATURES GROUPED ABOUT THE RANCHSTEAD Ranch House: Not a new house. It is located at some distance from the barns. Hired Man’s House: Work Sheds: Machine Shed: Barn: (Etc.)			

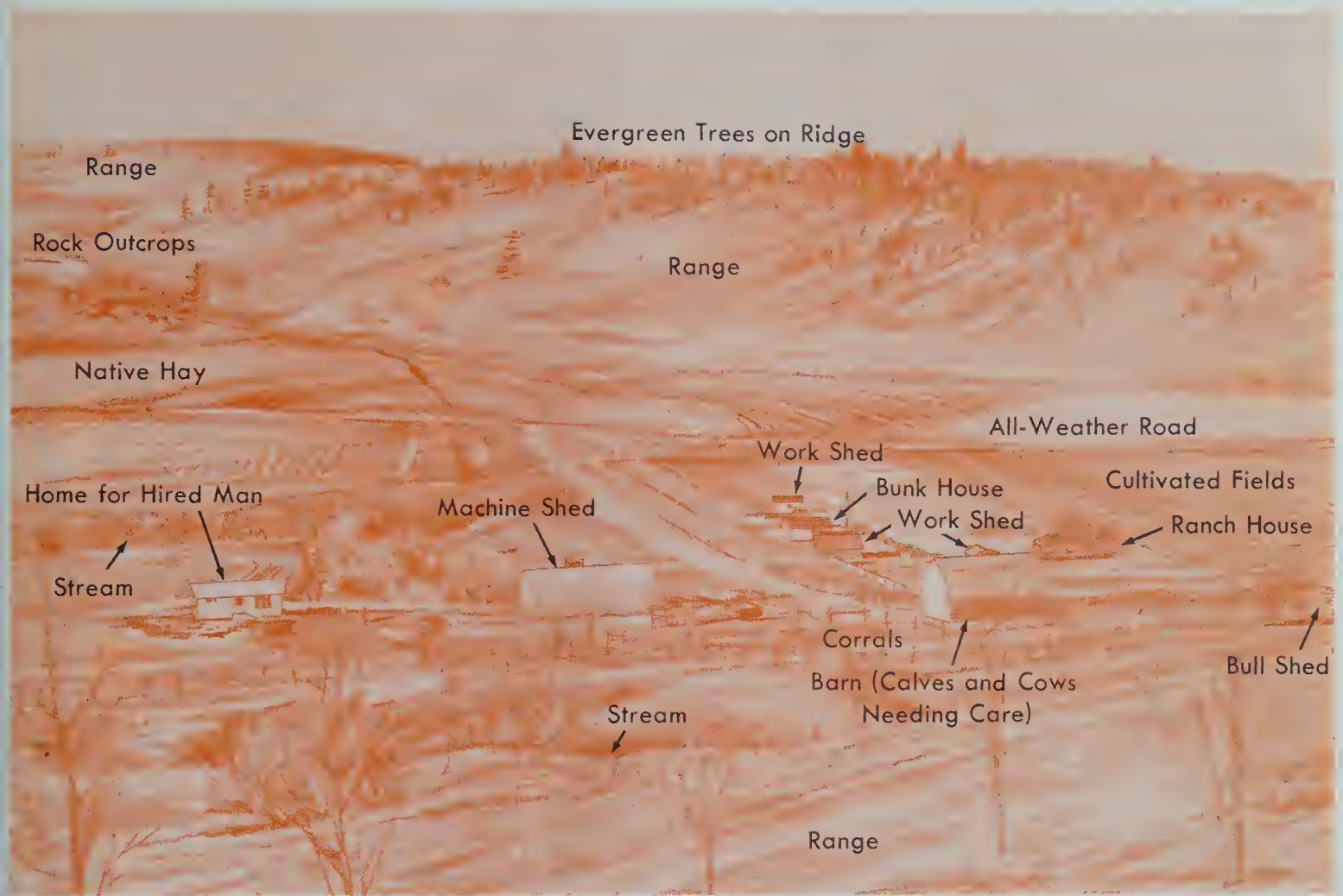


FIGURE 60.

The land

Figure 61 shows a part of the foothills that is representative of much of the land upon which ranches are located. Answer the questions that follow to find out if the Milvain land is like most foothills land.

QUESTIONS:

- (1) Most southern Alberta foothills range land is on the slopes of foothill ridges like those marked A and B and rolling valley bottoms like C. Is most of the Milvain range land like this?
- (2) Most cultivated land and tame hay land in the foothills is located on valley bottom lands like D or terraces like E. Are the Milvain's cultivated lands and tame hay found in such places?
- (3) Cultivated lands like those marked D are only a small part of most ranches. Is this true of the Milvain ranch?
- (4) In what ways is the Milvain ranch land representative of foothills land?



FIGURE 61.

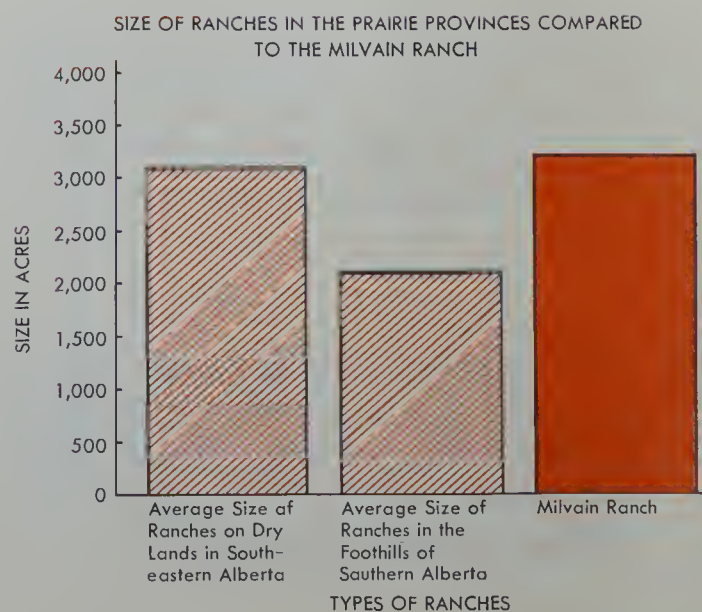
The size of the ranch

The bar graph shows the size in acres of the Milvain ranch in comparison to the average size of ranches in the foothills and dry plains of Alberta.

QUESTIONS:

- (1) Is the size of the Milvain ranch representative of the foothills ranching region?
- (2) Of what ranching region is the size of the Milvain ranch "closest" to being representative.

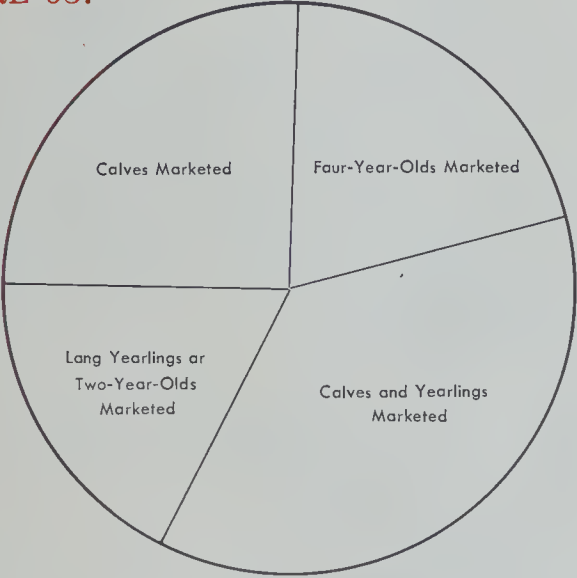
FIGURE 62.



The type of cattle production

The circle graph shows the major types of cattle production. As figure 41 has shown, the Milvains produce and market two year olds. Many ranchers sell calves a few months after they are born. Others sell both calves and yearlings. Some keep cattle on the ranch until they are four years old.

FIGURE 63.



TYPE OF CATTLE PRODUCED FOR SALE

QUESTIONS:

- (1) Which type of cattle production is most representative of ranching in the region?
- (2) Is the Milvain type of cattle production representative of the region?

Trends in Ranching

Have you ever used the word “trend?” Do you know what it means? Quite a few years ago the first television set was sold

in Canada. Soon more and more people were buying television sets and a trend had started. Trends also happen on ranches. After the first four-wheel-drive truck was sold to a rancher in Alberta, a trend started toward the buying of four-wheel-drive trucks. List three other trends.

An Interview with Mr. Elgaard

A good way to find out about trends in ranching is to ask questions of people who have studied ranching. One such person is Mr. Elgaard, a man who studies how ranchers and farmers make profits by buying and selling goods.

Question: I am going to ask some questions about trends in ranching in Alberta. I want to be able to compare these trends to trends on the Milvain ranch so that school students will be able to understand how other ranches are different from the Milvain ranch. My first question is, what are the most important trends in ranching in Alberta?

Mr. Elgaard’s Answer: Well, I am not sure I can say which trends are truly most important. I can only tell you of the ones I know about.

I have discovered that ranchers in Alberta are making more “intensive” use of their land and are using less labour.

Ranching is becoming more intensive as a result of several things ranchers are doing: first, they are cultivating more land than they used to; second, since this land is used to grow feed, they are producing more feed and giving more of it to the cattle; third, this has resulted in

increased production of cattle, since more animals can be supported in the winter time and fewer calves die in the spring.

Also, ranchers are using less labour and probably this means that they are becoming more mechanized. Since the work must still be done, I am assuming that mechanical equipment is doing the work that people used to do. Are these things happening on the Milvain ranch?

Let's see if they are. Let us check them off.

- (1) *Alberta ranchers are using their labour more intensively.* What about the Milvains? Mr. Milvain has told us that he has increased the amount of hay and grain he has grown over the last 20-30 years. He now provides more winter feed for his cattle.
✓Right, that checks.

- (2) *Ranches are becoming more mechanized?* In the last 10-20 years Mr. Milvain has bought a mountain mule, a four-wheel-drive truck and more tractors than he owned before. He has told us that not only has he increased the number of machines he owns, but he is using them much more often.
✓Right, that checks.

In short, the Milvain ranch is representative of at least two important trends in ranching in Alberta: increasing intensiveness and mechanization.

An Interview with Mr. Johnston

Mr. Johnston is a scientist who specializes in the study of range land and tame pasture land. When he was interviewed he had the following to say about ranching in the foothills of southern Alberta.

Question: What trends have you found in your studies of ranching in the foothills?

Mr. Johnston's Answer: Probably the most important trend is toward more careful planning. Ranchers have found that the cost of the supplies and labour that they buy has increased more than the prices they are paid for beef. Because of this, many ranchers have begun to plan more carefully how to use their land and produce cattle.

Question: Do you mean that ranchers are planning more carefully in order to become more efficient?

Mr. Johnston's Answer: That's another way of saying it . . . yes.

Question: What are some examples of the results of more careful planning?

Mr. Johnston's Answer: You have already mentioned more intensive use of land and increased mechanization. An example of both is the use of bulldozers to clear brush. More ranchers are doing this today than 20 years ago. Also, probably ranchers are paying more attention to caring for range land and the seeding of native pastures.

Question: What is likely to happen to the ranch like the Milvain ranch in the future . . . say in 50 years?

Mr. Johnston's Answer: That isn't an easy question to answer. My work has shown me that you can't tell what people will do for sure in the future. There are so many things that could happen, which would make what I say no longer worthwhile.

Question: I know. But what is most likely to happen? Base your answer upon what you know about ranches today.

Mr. Johnston's Answer: Well . . . O.K. But remember, this isn't a prediction of what *will* happen for sure.

First, probably Canada will need far more food in 50 years than it does now. This will be true for sure if the number of people all over the world continues to increase in the way it is increasing now. If this happens, ranchers and farmers everywhere will probably be encouraged to produce far more.

Much of the foothills land may be used for other types of crop or livestock production. For example, specialized chicken and turkey farms may cover much foothill land near Calgary. Already there are some farms like this around Okotoks and elsewhere. These farms produce far more food per acre than do ranches.

Also, more of the land may be used for recreation. Many areas in the foothills are beautiful enough to become parks. Whether or not this will happen may depend upon how much demand there is for food or parks.

However, probably much of the land will still be used for ranching. Ranchers may be offered high enough prices for beef to be able to afford to make even

more intensive use of the land than they do now. Some ranches may be much larger in area, probably the ones on the roughest land. Other ranches, the ones on the smoothest land, may be divided into smaller units. The smallest ranches may become cattle farms. More land may be cultivated, perhaps by machines not yet invented that can operate more efficiently on rough land. Some pastures and fields may be sprinkled by water from underground pipes. Irrigated areas can produce a great deal of cattle feed. Stock feeder farms may become a lot more common.

Possibly much of the brush that now covers what was once good range will be cleared. Also, perhaps many areas of native grasses will be re-seeded with even more nutritious tame grasses.

Probably new ways of caring for cattle will be invented. Some of the machines now available may cost less to buy or use. Maybe we will see more use of airplanes or helicopters. Also, I hope that many ranchers will raise sheep as well as cattle. It has been shown that sheep tend to graze different plants than do cattle and that range grazed by both animals can produce much more food than range grazed by cattle alone.

Remember that these are only possibilities. Perhaps very different things will happen. What I can say for sure is that the foothills are excellent ranching land today and while most ranchers have plenty of problems, they are solving enough of them to make a good living.

Summary

- (1) Make a chart to summarize the ways in which the Milvain ranch is representative of farming in Canada. Use the following heading: How is the Milvain Ranch Representative of Farming In Canada? Make a second chart to show how the Milvain ranch is representative of ranching in Alberta.
- (2) Make a model of an imaginary ranch. Try to make the ranch as representative of ranching in the foothills as possible.
- (3) If possible, take a field trip to study a cattle farm. Try to pick a cattle farm that uses the land in a very intensive way. Compare the farm to the Milvain ranch. Be sure to find out how the farm has changed over the last 50 years, 30 years, 10 years. Before you go, make a careful plan of what you must find out.
- (4) Find information about ranching as it was in Canada or the United States 50 to 100 years ago. List ways in which ranching for the Milvains is different from ranching 50 to 100 years ago. Suggest reasons for some of the changes.
- (5) Make a mural to show ranching 50 to 100 years ago; ranching today; ranching as it might be in the future. (Use Mr. Johnston's ideas and your own.)



FREE BOOKS THAT GIVE MORE INFORMATION ABOUT CATTLE RANCHING IN ALBERTA

1. *Calf to Carcass*, by Ed Noad, High River, Alberta. (This booklet gives information about how cattle are selected and cared for. It has many pictures.)

Send order to: Canadian Hereford Association,
1706 1st Street S.E.,
Calgary, Alberta

2. *Farming in Alberta, Canada*, by R. E. English, Alberta Department of Agriculture. (This book provides information about cattle farming and ranching in Alberta. It is written at a Junior to Senior High School level of difficulty, but perhaps your teacher can explain parts of it to you. It has many good pictures of ranching activities.)

Send order to: Extension Service,
Alberta Department of Agriculture,
Edmonton, Alberta

3. *Range, Its Nature and Use*, by Alex Johnston, Alberta Department of Agriculture. (This book was prepared by one of the men interviewed in Unit VII. It will probably be difficult to read, but it has many excellent pictures and charts. It tells much about range land and how it should be cared for.)

Send order to: Extension Service,
Alberta Department of Agriculture,
Edmonton, Alberta

4. *The Alberta Story, Province of Alberta, Canada, Land for Living*, by H. Martin, Alberta Department of Industry and Development. (This book contains much information about Alberta in general. It has many excellent coloured photographs; a few are of cattle ranching.)

Send order to: Albert Government Publicity Bureau,
Department of Industry and Development,
Edmonton, Alberta

5. *The Romance of Beef*, by Cliff Faulknor, Calgary, Alberta. (This book contains many pictures and much information about the history of cattle ranching and ranching in Alberta today. You may need some help from your teacher when you use it.)

Send order to: Canadian Hereford Association,
1706 1st Street S.E.,
Calgary, Alberta

Several copies of these books may be sent to your class if you or your teacher send an order on behalf of your school.

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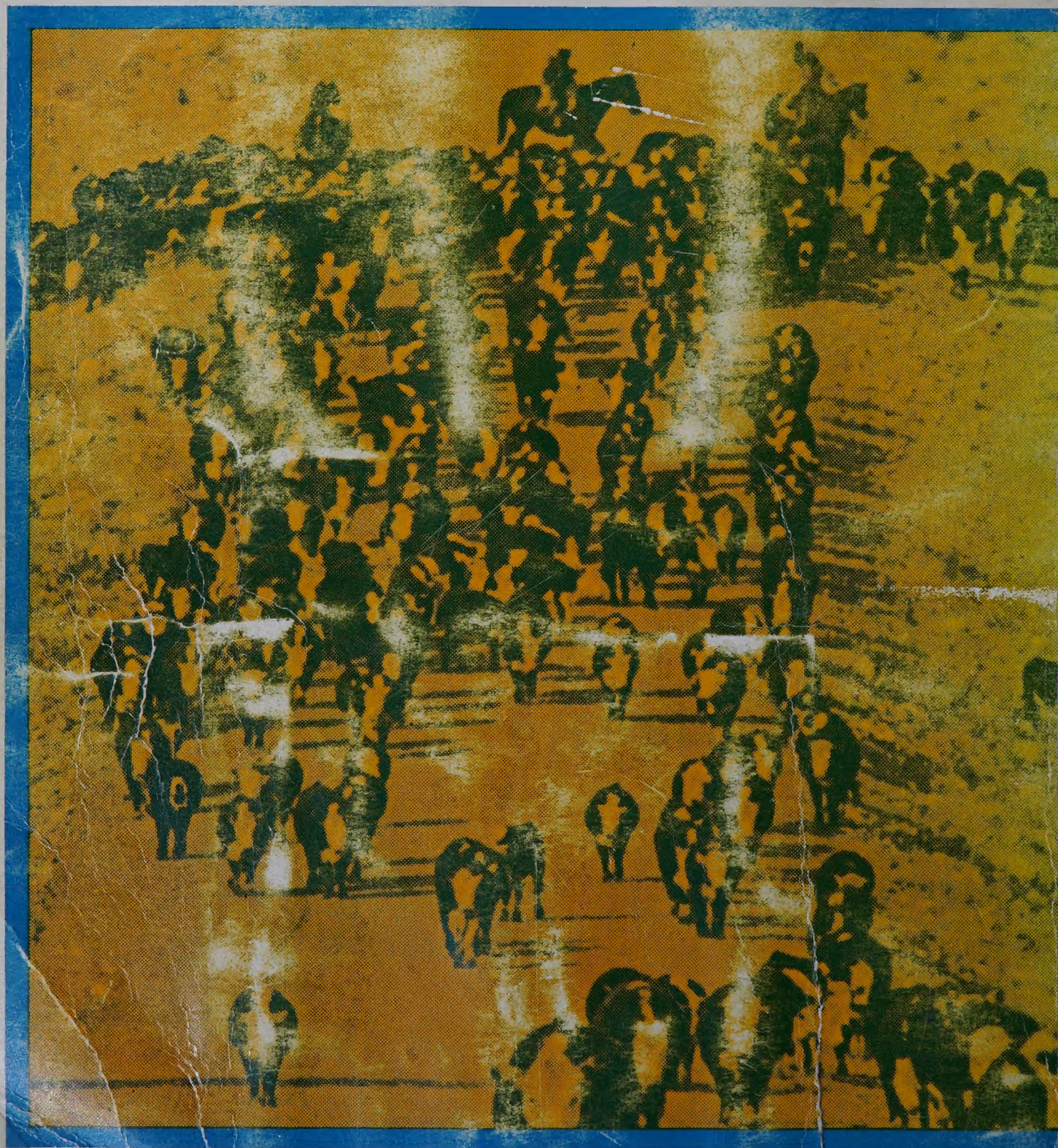
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